MODIFICATION NO. M073
SUPPLEMENTAL AGREEMENT TO
CONTRACT NO. DE-AC02-98CH10886

MODIFICATION NO. M073

CONTRACTOR AND ADDRESS:	Brookhaven Science Associates, LLC Brookhaven National Laboratory Upton, NY 11973
MODIFICATION FOR:	Replacement of Article 9, Public Affairs; Addition of Article 9A, Community Commitment; Modification to Article 32, Allowable Costs And Fixed Fee (Management And Operating Contracts) (Deviation); Replacement of Appendix B Performance Measures; Replacement of Appendix I, DOE Directives; Replacement of Appendix L, FY 2002 Fee Calculation/Attachment 1, Fee Determination Matrix.
PRIOR OBLIGATION:	$ 1,609,841,195.28
INCREASE IN MODS. A067 through A071	$ 296,630,354.90
INCREASE IN THIS MODIFICATION	$ -0-
CURRENT TOTAL OBLIGATION:	$ 1,906,471,550.18

THIS MODIFICATION, effective the 27TH day of February 2002, by and between the UNITED STATES OF AMERICA (hereinafter referred to as the "Government"), as represented by the UNITED STATES DEPARTMENT OF ENERGY (hereinafter referred to as "DOE"), and BROOKHAVEN SCIENCE ASSOCIATES, LLC (hereinafter referred to as the "Contractor"),

WITNESSETH THAT:

WHEREAS, the Government and the Contractor entered into Contract No. DE-AC02-98CH10886 on the 5th day of January 1998, for the operation of the Brookhaven National Laboratory; and

WHEREAS, said contract has been modified previously, and the parties desire to modify said contract further, as hereinafter provided; and

WHEREAS, this modification is authorized by law, including 41 U.S.C. 252(c)(15), P.L. 95-91 and other applicable law;

NOW, THEREFORE, said contract, as modified previously, is hereby further modified as follows:

1. ARTICLE 9 COMMUNICATION AND TRUST (SPECIAL) clause is deleted in its entirety and replaced with the attached ARTICLE 9, 952.204-75 -- PUBLIC AFFAIRS (DEC 2000) clause.

2. ARTICLE 9A 970.5226-3 - COMMUNITY COMMITMENT (DEC 2000) is added.

3. ARTICLE 32 ALLOWABLE COSTS AND FIXED FEE (MANAGEMENT AND OPERATING CONTRACTS) (JUN 1997) (DEVIATION) is modified as follows:

   The first sentence of paragraph (b) Fee(s) is modified by adding the following phrase to the end of the sentence, "for the period October 1, 2001 through and including September 30, 2002," and by deleting the phrase "for the period October 1, 2000 through and including September 30, 2001." The phrase "the maximum fee earnable is $7,000,000.00 as determined by the procedures outlined in Appendix L - Computation of Fee," remains the same.

   The third sentence of paragraph (b) Fee(s) is modified by deleting the phrase "periods October 1, 2001, to and including September 30, 2002, and October 1, 2002, to and including January 4, 2003, are unspecified."and adding the phrase "period October 1, 2002, to and including January 4, 2003, is unspecified."

4. APPENDIX B – CRITICAL OUTCOMES, OBJECTIVES AND PERFORMANCE MEASURES, FY 2001, identified as Modification M055 is deleted in its entirety and replaced with the attached revised Appendix B, Critical Outcomes, Objectives And Performance Measures for FY 2002, identified as M073.

5. APPENDIX I - DOE DIRECTIVES: DOE Directives identified as Modification M072 is deleted in its entirety and replaced with the attached. Appendix I is revised by adding DOE Notice 450.4, CRD - Assignment of Responsibilities for Executive Order 13148, Greening the Government Through Leadership in Environmental Management, dated 2/5/01; and by adding DOE Notice 450.5, Assignment of Responsibilities for Executive Order 13148, Greening the Government Through Leadership in Environmental Management, dated 8/24/01.

6. APPENDIX L – FEE COMPUTATION: FY 2001 Appendix L, Fee Computation/Attachment 1, Fee Determination Matrix, identified as Modification M055 is deleted in its entirety and replaced with the attached revised Appendix L, Fee Computation and Attachment 1, Fee Determination Matrix, identified as FY 2002 Fee Computation, Modification M073.

IN WITNESS WHEREOF, the parties have executed this document.

UNITED STATES OF AMERICA

DEPARTMENT OF ENERGY

BY: Robert P. Gordon

Robert P. Gordon
Contracting Officer
(Title)

DATE: 2-27-02

BROOKHAVEN SCIENCE ASSOCIATES, LLC

BY: Brian P. Sack

Brian P. Sack
Chief Financial Officer
(Title)

DATE: 3/7/02

ARTICLE 9 952.204-75 -- Public Affairs (DEC 2000)

(a) The Contractor must cooperate with the Department in releasing unclassified information to the public and news media regarding DOE policies, programs, and activities relating to its effort under the contract. The responsibilities under this clause must be accomplished through coordination with the Contracting Officer and appropriate DOE public affairs personnel in accordance with procedures defined by the Contracting Officer.

(b) The Contractor is responsible for the development, planning, and coordination of proactive approaches for the timely dissemination of unclassified information regarding DOE activities onsite and offsite, including, but not limited to, operations and programs. Proactive public affairs programs may utilize a variety of communication media, including public workshops, meetings or hearings, open houses, newsletters, press releases, conferences, audio/visual presentations, speeches, forums, tours, and other appropriate stakeholder interactions.

(c) The Contractor's internal procedures must ensure that all releases of information to the public and news media are coordinated through, and approved by, a management official at an appropriate level within the Contractor's organization.

(d) The Contractor must comply with DOE procedures for obtaining advance clearances on oral, written, and audio/visual informational material prepared for public dissemination or use.

(e) Unless prohibited by law, and in accordance with procedures defined by the Contracting Officer, the Contractor must notify the Contracting Officer and appropriate DOE public affairs personnel of communications or contacts with Members of Congress relating to the effort performed under the contract.

(f) In accordance with procedures defined by the Contracting Officer, the Contractor must notify the Contracting Officer and appropriate DOE public affairs personnel of activities or situations that may attract regional or national news media attention and of non-routine inquiries from national news media relating to the effort performed under the contract.

(g) In releases of information to the public and news media, the Contractor must fully and accurately identify the Contractor's relationship to the Department and fully and accurately credit the Department for its role in funding programs and projects resulting in scientific, technical, and other achievements.

ARTICLE 9A 970.5226-3 -- COMMUNITY COMMITMENT (DEC 2000)

It is the policy of the DOE to be a constructive partner in the geographic region in which DOE conducts its business. The basic elements of this policy include:

(1) Recognizing the diverse interests of the region and its stakeholders,

(2) Engaging regional stakeholders in issues and concerns of mutual interest, and

(3) Recognizing that giving back to the community is a worthwhile business practice. Accordingly, the Contractor agrees that its business operations and performance under the Contract will be consistent with the intent of the policy and elements set forth above.

APPENDIX B

CRITICAL OUTCOMES, OBJECTIVES AND PERFORMANCE MEASURES

FY 2002

BROOKHAVEN NATIONAL LABORATORY

Contract No. DE-AC02-98CH10886
Modification No. M073
January 30, 2002

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Attachment 1 Critical Outcomes, Objectives, and Performance Measures
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2. Operational Excellence CO2-1
3. Leadership and Management CO3-1

Performance Evaluation System

I. Introduction

This Contract Appendix sets forth the performance evaluation system (including processes, criteria, schedules, and measures) that will be used to evaluate the overall performance of Brookhaven Science Associates (BSA) in the management and operation of Brookhaven National Laboratory (BNL) in Fiscal Year 2002 (FY02).

For FY02, in accordance with Article 6 of the Contract, the Parties have agreed to use a Performance-Based Management System (PBMS) that includes clear and reasonable objectives, against which BSA's overall performance will be evaluated. For this purpose, the parties have agreed to an objective hierarchy consisting of Critical Outcomes, underlying Objectives, and associated weighted Performance Measures and Metrics for the assessment of BSA's performance and the resulting determination of fee.

The DOE Office of Science (SC) identified high-level expectations in six critical activities/functional areas that SC would use to guide its regular assessment of Laboratory performance. These critical areas are Science, Environment, Safety & Health (ES&H), Infrastructure, Business Operations, Leadership, and Stakeholder Relations. SC expects SC/Headquarters (HQ) program managers, field offices, and laboratories to work in partnership to develop laboratory-specific outcomes, objectives, and measures that support these high-level expectations and to use self-assessment as a tool to achieve desired outcomes and continuous improvement.

This "Critical Outcome Process" is designed to measure overall performance and drive the improvement agenda of the Laboratory by linking Laboratory rewards, i.e., performance ratings and associated fees, to a prioritized set of objectives that have been mutually developed by the Department of Energy (DOE) and BSA. DOE and BSA have mutually agreed to the specific Critical Outcomes, Objectives, and Performance Measures contained herein, and, as described in Articles 6 and 7, agree to a reassessment of the process, prior to the beginning of each evaluation period.

II. Critical Outcome, Objective, and Measure Development

The following concepts are used in the development of the Performance Measures and are provided for information and clarification in the process:

1. The Critical Outcome process must be flexible to accommodate changes as planned improvements are realized and/or customer priorities vary. For example, even though the Critical Outcomes and Objectives are intended as sustainable targets over a 3-5 year and 1-3 year time frames respectively, their relative weights are expected to change more frequently. Re-prioritization of the Critical Outcomes and Objectives is a fundamental part of the annual Critical Outcome process.

2. Critical Outcomes, their underlying Objectives, and associated Performance Measures should influence the improvement agenda of the Laboratory. They should incorporate best practices and reflect the DOE and BNL functional managers' judgment as to the key performance elements for overall successful operations. Best practices should consider cost/risk/benefit effectiveness. Examples of key elements addressed are:

   Quality of product
   Timely delivery
   Cost reduction
   Cycle time reduction
   User friendliness
   DOE requirements

3. Performance Measures should be results-oriented and should focus on criteria that are objectively measurable and allow for meaningful trend and rate-of-change analysis where possible. They should use qualitative criteria in those cases where objective criteria will not produce meaningful evaluation results.

4. Performance Measures may reference industry business standards that are meaningful, appropriate and consistent with DOE requirements, rather than arbitrary standards. To this end, benchmarking initiatives are encouraged. Using benchmarks to change targets should consider whether it is cost effective to make further improvements or if the target level should be raised.

5. The relative weighting and metrics for each Performance Measure shall be established prior to the start of the performance period by mutual agreement of the Contractor and the DOE Contracting Officer. If the parties cannot reach agreement, the Contracting Officer shall have the right to establish such weights, subject to the provisions outlined in Article 7 of the Prime Contract.

6. Background and supporting information (such as purpose, means and strategies, assumptions definitions, etc.), shall be documented as appropriate.

7. Measures are to be developed in a team approach involving DOE personnel and Laboratory functional managers. Care should be taken to ensure that the resulting measures reflect performance in areas for which the Laboratory functional manager is accountable, correctly reflecting their status as responsible for the performance and desired improvement.

8. Absence of a Performance Measure does not diminish the compliance with specified contractual requirements in that area of performance. Failure to meet a significant contractual requirement may result in the Contracting Officer overriding the Performance Measures.

III. Change Control

DOE and BSA acknowledge that implementation of this performance-based contract requires both parties to continually refine selected Performance Measures and metrics, implement data collection and reporting mechanisms, and seek benchmarks against which to set appropriate targets for performance improvement and/or measurement. Continuing effort is needed to refine the system for scoring performance in each of the Critical Outcomes included in this Appendix and for integrating these scores into an overall evaluation rating for each performance period.

The process to change aspects of performance within the fiscal year, if necessary, is described in the Standards Based Management System (SBMS) Subject Area entitled, "Critical Outcome Performance Measures."

IV. Evaluation Scoring

Each Measure, Objective, and Critical Outcome is rated in accordance with the following:

OUTSTANDING	>3.5 to 4.0
EXCELLENT	>2.5 to 3.5
GOOD	>1.5 to 2.5
MARGINAL	>0.5 to 1.5
UNSATISFACTORY	$\leq$ 0 to 0.5

Once the adjectival rating is determined, the cognizant BSA manager (owner) considers other related aspects of performance (e.g., quality, efficiency, etc.) and determines an appropriate numerical rating. For example, a performance measure that met schedule quality expectations with an adjectival rating of Excellent, but an external review indicates that the work represented a "best-in-class" effort, may warrant a

3.5 rating. Similarly, a measure that met quality requirements for an excellent rating but required substantial re-work to achieve it may warrant a numerical score on the lower end of the excellent range, perhaps a 2.6.

A roll-up score is determined by multiplying the weight of each Performance Measure in that Objective by its score. These are added together to develop an overall score for each Objective, which is then translated into an adjectival rating. The process is continued for the Critical Outcomes by multiplying the scores for each Objective within a given Critical Outcome by its corresponding weight, adding the resulting numbers to get a Critical Outcome score, and converting this score to an adjectival rating as done for the Objective level. The same process is then used to calculate an overall score, and then the adjectival rating, at the Laboratory level.

V. Self-Evaluation and Improvement Agenda

BSA and DOE will conduct a mid-year review of status against performance measures contained in Attachment 1. BSA is responsible to define and coordinate the process for conducting the review and to ensure the involvement of appropriate DOE counterparts and BSA management.

On an annual basis, the Laboratory will conduct a formal Self-Evaluation of its performance relative to each Critical Outcome, Objective, and Performance Measure identified in Attachment 1 to this Appendix. This Report will also address other significant issues or opportunities that arise from the Laboratory's broader Integrated Assessment Program, whether or not they specifically impact the Critical Outcomes.

As part of the mid-year review and the annual self-evaluation process, both BSA and DOE will confirm that performance measures defined in Attachment 1 (for the current and next FY) adequately reflect the scope and priorities for Laboratory management focus.

VI. DOE Evaluation

The DOE evaluation of BSA's performance, and, in turn, the DOE determination of BSA's Fee, will be based primarily on the performance levels achieved against the weighted Performance Measures identified above. In addition, for each Critical Outcome area, the Contracting Officer may also consider any other relevant information directly or indirectly related to the Critical Outcome, including areas of performance monitoring defined by the Supporting Assessment Measures (SAMs), that is deemed to have had an impact (either positive or negative) on the Contractor's performance. The fact that a SAM is "topically aligned" under a particular Critical Outcome Area does not preclude the Contracting Officer from considering that SAM's impact upon other Critical Outcome areas. Should the Contracting Officer consider other relevant information in establishing the final performance rating for any Critical Outcome, the Contractor will receive written notice of such intent and will be given the opportunity to respond in writing. This agreement does not impact DOE's rights under Article 6, Paragraph (f), of the Prime Contract.

The Director of the Office of Science (SC-1) has the primary responsibility for evaluating Science and Technology performance (Critical Outcome 1), but practical input also will be sought from cognizant DOE Assistant Secretaries, Office Directors, and Program Managers. The Contracting Officer has the primary responsibility for evaluating performance relative to Critical Outcomes 2 and 3 in accordance with the Objectives, Performance Measures, and Metrics of Attachment 1. However, the Contracting Officer shall inform SC-1 of any issues or concerns that should be considered when evaluating the Contractor's performance in Critical Outcome 1. This is especially important in those areas where operational performance could have a significant impact on the Contractor's ability to conduct successful research for the Department. The Contractor has responsibility to compile the data necessary to document its performance against all measures.

VII. Critical Outcomes, Objectives, and Performance Measures

The Laboratory's Critical Outcomes for Fiscal Year 2002 are:

Science and Technology - *BNL will deliver innovative, forefront science and technology aligned with DOE strategic goals in a safe, environmentally sound, and efficient manner, and will conceive, design, construct, and operate world-class user facilities.*

Environmental Restoration- *BNL will deliver "Best-In-Class" solutions in conducting the Environmental Restoration Program. Focused upon completion, the results will be protective of the environment, cost effective, and performed in an open exchange with the community, our regulators, and other stakeholders. BNL will continue to keep the commitments agreed to in the Memorandum of Understanding signed by Dr. Marburger and Mr. Holland on May 4, 2001.*

Management and Operations - *BNL will manage and enhance operations and management processes to provide an effective and efficient work environment that enables the execution of the BNL mission in a manner responsive to customer and stakeholder expectations.*

In FY02, the relative weights of the Critical Outcomes reflect a high priority on the success of the Laboratory's science and technology mission and the need for continued improvement and focus on the Laboratory's environmental cleanup activities. At the Objective level, the FY02 priorities clearly reflect an increased emphasis on BSA's self-assessment program while maintaining a balanced perspective of institutional performance consistent with SC expectations.

The Critical Outcomes, Objectives, and Measures, and their relative weights, are:

- **1.0 Excellence in Science & Technology** **60%**

  - Objective 1.1 Research Quality 35%
  - Objective 1.2 Relevance to DOE Missions 10%
  - Objective 1.3 Construct & Operating Facilities 30%
  - Objective 1.4 Research Program Management 25%

- **2.0 Environmental Restoration** **8%**

  - Objective 2.1 Operational Excellence 60%
    - Measure 2.1.1 On Time Starts of Major Projects 100%
  - Objective 2.2 Execution of Program Activities 40%
    - Measure 2.2.1 Cost Performance 50%
    - Measure 2.2.2 Schedule Performance 50%

- **3.0 Laboratory Management and Operations** **32%**

  - Objective 3.1 Management and Business Processes 55%
    - Measure 3.1.1 Assessment and Improvement 70%
    - Measure 3.1.2 Business Processes 25%
    - Measure 3.1.3 Workforce/Diversity 2%
    - Measure 3.1.4 Corporate Involvement 3%
  - Objective 3.2 Environment, Safety and Health 15%
    - Measure 3.2.1 Legacy ES&H Risk Management 30%
    - Measure 3.2.2 Ongoing ES&H Risk Management 70%
  - Objective 3.3 Site Infrastructure, Facilities, and Operations 10%
    - Measure 3.3.1 Alternative Financing for Infrastructure Projects 30%
    - Measure 3.3.2 Project Management 70%

- Objective 3.4 Information Technology			10%
Measure 3.4.1	Cyber Security	55%	
Measure 3.4.2	Scientific Computing Infrastructure	45%	
-Objective 3.5 Communications and Trust			10%
Measure 3.5.1	Building National Recognition	50%	
Measure 3.5.2	Stakeholder Involvement and Understanding		50%

In FY02, BSA and the DOE agreed to enhance the role of the Laboratory's self-assessment process in performance-based management. To support this, in addition to defining the Critical Outcomes, Objectives and Measures, the scope of institutional level self-assessment program would also be developed in partnership and defined in this Appendix. Supporting Assessment Measures (SAMs) are identified under Objectives in this Appendix. SAMs serve to:

- Track/inform/confirm expected levels of performance (compliance, operational statistics, progress towards improvement initiatives, etc.)
- Identify vulnerabilities from sources such as previous assessment results, lessons learned (institutional and complex wide), occurrence reports, etc.

Combined, the Critical Outcomes, Objectives, Measures, and Supporting Assessment Measures, define the scope of planned institutional level self-assessment activities. This approach ensures that priorities and resources associated with institutional assessment activities supporting Critical Outcomes and Objectives are considered and balanced with the development of the specific measures and metrics contained in the Critical Outcome Trees. The SAMs are "topically aligned" with the respective objectives. However, they are not specifically used for evaluation of the objective except as noted in Section VI "DOE Evaluation." The SAMs will be considered in the evaluation of the Laboratory's self-assessment program. Substantive (as distinguished from self assessment process) - performance determined from self-assessment activities defined by SAMs may also be considered in the evaluation of the Laboratory's self-assessment program where this substantive performance provides indication of the quality of the self-assessment program.

Contractually, SAM's are defined at a fairly high level. BSA will engage DOE to ensure that DOE perspectives and direction for the assessment approach as well as benchmarks or standards of performance are considered by the Laboratory in the development and implementation of the Laboratory assessment program.

FY02 Supporting Assessment Measures include assessment activities in the following areas:

Environmental Restoration Supporting Assessment Measures (SAMs)

- Project and Program Management Systems
- Stakeholder Involvement
- Waste Management
- Work Management

Laboratory Management and Operations Supporting Assessment Measures (SAMs)

- Human Resources
- Legal services
- Property Management
- Procurement Management
- Requirements Management
- Technology Transfer
- Training and Qualifications
- Uncosted Balances
- Work-for-Others (WFO), Federal and Non-Federal

Environment, Safety, and Health Supporting Assessment Measures (SAMs)

- Environmental Compliance
- Maintain ISO 14001 Registration
- Progress Toward Accelerator Authorization Basis Upgrades
- Radiological Control
- Recycling of Solid Waste
- Regulated Waste Management
- Safety and Health
- Worker Involvement in Work Planning and Control

Infrastructure, Facilities, and Operations Supporting Assessment Measures (SAMs)

- Building Manager Program
- Safeguards and Security
- Counterintelligence
- Emergency Planning and Preparedness
- Energy Management
- Management of Maintenance Activities

Information Technology Supporting Assessment Measures (SAMs)

- Information Services
- World Wide Web

The Critical Outcomes, Objectives, Performance Measures, and Supporting Assessment Measures agreed to for FY02 through the DOE/BSA Critical Outcome process are fully defined in Attachment 1 to this Appendix.

VIII. Schedule

In order to clearly define the path forward, the following generic schedule is presented as a guide. BSA and DOE acknowledge that the nature of the processes involved demands flexibility in the schedules.

DATE	ELEMENT
March	Begin development of next FY Critical Outcomes, Objectives, and Performance Measures.
April	BNL/DOE Management retreat to assess customer strategic needs, refine next FY Critical Outcomes, Objectives, and Measures.
April	Conduct Mid-year status review for current FY cycle.
September	Approve next FY Critical Outcomes, Objectives, and Measures.
September 30	Current evaluation period ends. Incorporate next FY Appendix B into Contract.
October 30	BSA submits Annual Self-Evaluation report for previous FY to DOE.
November 15	DOE transmits draft Evaluation Report for previous FY performance to BSA.
November 30	BSA submits comments on draft report.
December 15	DOE transmits final Evaluation report for previous FY performance to BSA.

IX. Definitions and Acronyms

Activity/Functional Area - The strategic areas of mission accomplishment outlined in the Director of the Office of Science expectations for Science Laboratory's program performance in the areas of Science, Environment, Safety & Health, Infrastructure, Business Operations, or Stakeholder Relations. These form the basis for the Laboratrory's Critical Outcomes, Objectives, and measures.

Critical Outcome - Performance end state having the highest level of strategic value or impact to DOE, BSA, or affected stakeholders; represent a sustainable target over a minimum of 3 to 5 years.

Critical Outcome Trees - The complete set of Critical Outcomes, Objectives, Measures, and Supporting Assessment Measures s (SAM's) for a given fiscal year; Synonymous with Attachment 1 to this Appendix.

Objective - A statement of desired outcomes for an organization or activity. Objectives are intended to be sustainable targets over a 1-3 year timeframe and form a complete, non-redundant set of results for evaluating progress toward achievement of the Critical Outcomes.

Measure - A quantitative or qualitative method for characterizing performance. Performance Measures are specific to the performance period, i.e., the fiscal year, and require the development of metrics (expectation) to facilitate adjectival ratings.

Metric (a.k.a. Expectation) - The desired condition or target level of performance for each measure.

Result - The actual condition or performance level for each measure.

Supporting Assessment Measures (SAMs) - Key Institutional Level Assessment activities that support a given objective, however, are not considered necessary and/or appropriate for inclusion as specific performance measures directly connected to the Laboratory. SAMs serve to:

- Track/inform/confirm expected levels of performance (compliance, operational statistics, progress towards improvement initiatives, etc.).
- Identify vulnerabilities in response to information obtained from sources such as results of previous assessments, lessons learned (institutional and complex wide), occurrence reports, etc.

Benchmark - A standard or point of reference for measurement, usually derived from values found in other institutions or organizations.

Outstanding - Significantly exceeds the standard of performance; achieves noteworthy results.

Excellent - Exceeds the standard of performance, although there may be room for improvement in some elements. Better performance in all other elements more than offsets this.

Good - Meets the standard of performance. Deficiencies do not substantively affect performance.

Marginal - Below the standard of performance; deficiencies are serious and may affect overall results; management attention and corrective action are required.

Unsatisfactory - Significantly below the standard of performance; deficiencies are serious, may affect overall results, and urgently require senior management attention.

Critical Outcome 1.0 Basic Science & Technology

BNL WILL DELIVER INNOVATIVE, FOREFRONT SCIENCE AND TECHNOLOGY ALIGNED WITH DOE STRATEGIC GOALS IN A SAFE, ENVIRONMENTALLY SOUND, AND EFFICIENT MANNER AND WILL CONCEIVE, DESIGN, CONSTRUCT, AND OPERATE WORLD-CLASS USER FACILITIES.

The weight of this Outcome is 60% of total.

Cognizant DOE Assistant Secretaries and Office Directors have primary responsibility for evaluating the performance of Laboratory Science and Technology programs. In carrying out this responsibility, the Assistant Secretaries and Office Directors are likely to request assistance from the Program Managers under whose jurisdiction the various individual Laboratory programs fall.

In performing this evaluation, the Assistant Secretaries and Office Directors have available input from the following sources:

1. DOE Program Managers who carry out periodic reviews of the programs they fund. These reviews usually include use of independent technical experts. The Program Managers may use written reviews as a basis for evaluating the quality of the science and technology performed by the Laboratory and its relevance to their programmatic goals.

2. The Science and Technology Advisory Committee of the BSA Board that oversees the internal reviews of science and technical programs at Brookhaven. Independent review committees whose membership is drawn from the external scientific and engineering communities review each major Laboratory program on an 18-month cycle. The committees evaluate Laboratory divisions and programs with respect to the quality and performance of the staff, the quality and timeliness of the work, and the relevance of the programs to the goals of the Laboratory and sponsoring agencies. Reviews include consideration of the Performance Measures described below. The Committees' written reports and the Laboratory's responses are made available to the BSA Board for Brookhaven, DOE Contracting Officers, and to relevant DOE Program Managers.

   In addition, input from Advisory Committees reporting to the cognizant DOE Assistant Secretary or Office Director that are appointed formally through the Federal Advisory Committee Act, from reviews of relevant Laboratory activities requested for the Secretary of Energy, or from cognizant Assistant Secretaries and Office Directors may be used.

3. BNL Self-Assessments, which include Department Self-Assessments, Independent Peer Review, and Department and Lab-level Annual Self-Evaluations.

Objective 1.1 Quality of Research

The weight of this Objective is 35%.

Reviewers will evaluate the overall quality of the research performed. Depending on the nature of the program, reviewers will consider the following:

Science: Success in producing original, creative scientific output that advances fundamental science and opens important new areas of inquiry; success in achieving sustained progress and impact on the field; and recognition from the scientific community, including awards, peer-reviewed publications, citations, and invited talks.

Technology: Whether there is a solid technical base for the work; the intrinsic technical novelty of the research; the importance of technical contributions made to the scientific and engineering knowledge base underpinning the technology program; and recognition from the technical community.

Objective 1.2 Relevance to DOE Missions and National Needs

The weight of this Objective is 10%.

Reviewers will consider whether the research fits within and advances the missions of DOE; contributes to U. S. leadership in the international scientific and technical communities; contributes to the goals and objectives of the Strategic plans of DOE and other national programs; and the extent of productive interaction with other Science and Technology programs. Depending on the nature of the program, reviewers will consider the following:

Science: The program's track record of success in making scientific discoveries of technological importance to DOE missions and U.S. industry; the degree of industrial interest in follow-on development of current research results; and the effective use of national research facilities that serve the needs of a wide variety of scientific users from industry, academia, and government laboratories.

Technology: The value of successfully developing pre-commercial technology to DOE, other federal agencies, and the national economy; the program's risks and costs; and, where appropriate, the degree of industrial interest, participation, and support.

Objective 1.3 Success in Constructing and Operating Research Facilities

The weight of this Objective is 30%.

Reviewers will consider whether the construction and commissioning of new facilities is on time and within budget; whether facility performance specifications and objectives are achieved; the reliability and safety of operations; adherence to planned schedules; and the cost-effectiveness of maintenance and facility improvements.

Reviewers will also assess the quality, innovation and achievements in designing and developing new facilities that will provide the next generation of research tools.

Reviewers of user facilities will also consider whether the user access program is effective, efficient, and user-friendly; the quality of the proposal evaluation process; the strength and diversity of user participation; the productivity of the research supported, both in science and technology; and the level of satisfaction among user groups.

Reviewers will consider the extent to which BNL provides effective and efficient leadership in the development of the Spallation Neutron Source (SNS) Project. In this project, the Laboratory will perform assigned tasks and produce scheduled deliverables for the Spallation Neutron Source in accordance with the Inter-Lab Memorandum of Agreement (MOA) and the approved annual work plans. Expectations for BNL performance in this area are reflected in the following Table.

Outstanding	Deliver annual work plan elements below cost and ahead of schedule.
Excellent	Deliver annual work plan elements on cost and schedule, including up to 50% of contingency.
Good	Deliver annual work plan elements within BNL project cost and/or schedule, including greater than 50% but less than or equal to 100% of contingency.
Marginal	Delivery of annual work plan elements exceeding cost and/or schedule, including contingency, such that BNL project critical path is impacted.
Unsatisfactory	Delivery of annual work plan elements exceeding cost and/or schedule, including contingency, such that overall SNS project critical path is impacted.

Objective 1.4 Effectiveness and Efficiency of Research Program Management

The weight of this Objective is 25%.

Reviewers will consider the quality of research plans; whether technical risks are adequately considered; whether

use of personnel, facilities, and equipment is optimized; success in meeting budget projections and milestones; the effectiveness of decision-making in managing and redirecting projects; success in identifying and in avoiding or overcoming technical problems; the effectiveness with which technical results are communicated to maximize the value of the research results and to gain appropriate recognition for DOE and the Laboratory; effectiveness in developing, managing, and transferring to industry intellectual property and technical know-how associated with research discoveries; and the degree to which customer and stakeholder expectations are consistently met.

Critical Outcome 2.0 Environmental Restoration

BNL WILL DELIVER "BEST-IN-CLASS" SOLUTIONS IN CONDUCTING THE ENVIRONMENTAL RESTORATION PROGRAM. FOCUSED UPON COMPLETION, THE RESULTS WILL BE PROTECTIVE OF THE ENVIRONMENT, COST EFFECTIVE, AND PERFORMED IN AN OPEN EXCHANGE WITH THE COMMUNITY, OUR REGULATORS, AND OTHER STAKEHOLDERS. BNL WILL CONTINUE TO KEEP THE COMMITMENTS AGREED TO IN THE MEMORANDUM OF UNDERSTANDING SIGNED BY DR. MARBURGER AND MR HOLLAND ON MAY 4, 2001.

The weight of this Outcome is 8% of total.

Objective 2.1 Operational Excellence in Environmental Restoration

The weight of this Objective is 60%.

BSA will incorporate operational excellence into work planning, authorization and implementation. Hazards are identified and mitigations developed during work planning. Work authorization includes levels of coordination and management review appropriate to risks and impacts. Incidents are reported promptly and timely actions are taken to resolve the problem and prevent recurrence. Trends are analyzed and feedback provided to improve performance. Management systems in use are effective tools in minimizing or avoiding events that could compromise safety or impact project costs and schedule.

Measure 2.1.1 On Time Starts of Major Projects

The weight of this Measure is 100%.

BSA will be evaluated on the quality of work planning and schedule management via the achievement of schedule start dates for major projects. The identification and start dates are mutually agreed to with BAO and are contained in Table 2.

Performance Level Metrics

Outstanding	BSA achieves all 12 Major Project Starts (MPS's); 11 no later than 2 weeks of specified start date, 1 no later than 4 weeks of specified start date.
Excellent	BSA achieves all 12 MPS's; 9 no later than 2 weeks of specified start date, 3 no later than 4 weeks of specified start date.
Good	BSA achieves all 12 MPS's no later than 4 weeks of specified start date.
Marginal	BSA achieves all 12 MPS's; 6 no later than 4 weeks of specified start date, 6 more than 4 weeks after specified start date.
Unsatisfactory	BSA does not achieve any of the 12 MPS's within 4 weeks of specified start date.

Conditions

1. The specified dates for the MPS's may be changed via DOE and BNL's formal baseline change control process. Reasons for change may include need for substantial additional characterization, substantive stakeholder concerns that affect project starts, force majeure, etc. The change control level for MPS is level 2b.
2. A Major Project Start represents a tangible field, remediation or removal activity that is significant to the customer and stakeholders. The project start represents the culmination and integration of the appropriate planning, procurement, resources, documents and reviews. It is recognizable and auditable in the field. Once started, the project will continue to make substantive progress through an on-schedule completion.
3. BSA will reevaluate the path forward and baseline for the BGRR and present their recommendations by February 15, 2002 including preliminary dates for the BGRR MPSs denoted TBD and new IAG milestones/schedules. Changes to all BGRR schedules and milestones resulting from this effort will be

implemented through change control. The final version of these BCPs will be submitted to DOE by March 31, 2002

Objective 2.2 Execution of Program Activities

The weight of this Objective is 40%.

BSA will expertly, expeditiously, and economically plan, conduct, and complete decontamination and decommissioning of surplus facilities; removal and disposal of wastes; and remediation of soils and groundwater contaminated by past practices. These projects will be safely but aggressively undertaken, closely controlled, and focused on completion. BSA will aggressively manage cost and schedule performance within acceptable performance measures and achieve all major Interagency Agreement milestones on or before their commitment date with the regulatory agencies.

Measure 2.2.1 Cost Performance

The weight of this Measure is 50%.

BSA will be evaluated on its cost effective performance management of the baseline for FY 2002.

Cost Performance Index = (Budgeted Cost of Work Performed)/(Actual Cost of Work Performed)

Performance Level Metrics

Outstanding	CPI $\geq$ 1.020
Excellent	0.980 < CPI <1.020
Good	0.950 < CPI $\leq$ 0.980
Marginal	0.900 < CPI $\leq$ 0.950
Unsatisfactory	CPI $\leq$ 0.900

Conditions:

1.) Because of the uncertainties associated with the project scope, the above metric does not include the BGRR. However, the Project to Date Cost Variance (BCWP-ACWP)/BCWP * 100%) at the end of FY 2002 for the BGRR must be greater than – 20 percent for the BGRR as verified by BAO.
2.) BCWP from BCPs processed for activities performed and costed in prior years (i.e. pre-2002) is excluded from the calculation. This information will be included in the BCPs.

Measure 2.2.2 Schedule Performance

The weight of this Measure is 50%.

BSA will meet and accelerate all primary, secondary and removal action milestones scheduled under the Interagency Agreement (IAG) as agreed upon with the U.S. EPA and NYSDEC and all Level 1, 2A, and 2B Milestones. Additionally, BSA will accelerate the out-year milestones listed in Table I to demonstrate superior schedule performance.

Performance Level Metrics

Outstanding	All FY02 Milestones described above are met on schedule. In addition, 3 or more of the FY03/FY04 Acceleration milestones are completed by September 30, 2002.
Excellent	All FY02 Milestones described above are met on schedule. In addition, 2 of the FY03/FY04 Acceleration Milestones are completed by September 30, 2002.

Good	BSA completes all FY02 milestones described above on schedule.
Marginal	BSA misses one FY02 milestone.
Unsatisfactory	BSA misses two or more FY02 milestones.

Assumptions

1. No IAG milestones dates agreed upon with the Regulators may be missed. However, IAG milestone dates are subject to change through IAG Milestone Extension requests.
2. Level 1 and 2 milestones are subject to change through baseline change control.
3. Accelerated FY03/FY04 milestones may be substituted for missed FY02 milestones in a two for one ratio.
4. BNL must continue to make good progress towards IAG and level 1 and 2 milestones that occur in FY 2003 during FY 2002. FY 2002 performance cannot result in missing FY 2003 milestones.

Environmental Restoration Supporting Assessment Measures (SAMs)

Project and Program Management Systems: BSA will assess its implementation of project management systems in accordance with DOE requirements and industry standards including progress on implementing its Re-Engineering agenda through FY 2002; DOE Order 413 compliance; earned value and project reporting; and baseline change and maintenance. Both DOE and BSA will continue the assessment reviews initiated in FY01. BSA action will be taken to improve performance in this area as part of its Re-Engineering agenda.

Stakeholder Involvement: BSA will assess the condition and success of stakeholder and regulatory relations for the EM program. This assessment will evaluate the quality, timeliness and effectiveness of interactions with regulators and other stakeholders; interface and coordination with Community Education Government and Public Affairs (CEGPA) and DOE; communication, outreach and regulatory planning; development of materials (including supporting documents, fact sheets and other communication items, and regulatory reports such as EE/CA's, etc.); and, execution. BSA management action will be taken as necessary to improve performance in this area.

Waste Management: BSA will assess its progress in implementing an integrated and cost effective waste management for its EM program. The focus in FY 2002 will be to identify and take the necessary actions to minimize non-conforming waste shipments; identify and implement cost effective waste transportation and disposal mechanisms; and the reduction of waste inventories at the BGRR. BSA management action will be taken as necessary to improve performance in this area.

Work Management: BSA will assess the implementation of ISM practices within the planning and execution of environmental restoration and decontamination and decommissioning fieldwork and waste management operations. The focus in FY 2002 will be implementation of work planning processes, minimization of radiological contamination events, and incorporation of lessons learned. BSA management action will be taken as necessary to improve performance in this area.

Table 1 FY03 / FY04 Acceleration Milestones

1. Submit HWMF Soil Draft RA Work Plan to EPA/DEC –March 7, 2003
2. Submit Magothy Summary Report to BNL/DOE-Oct 15, 2002
3. Submit Magothy Characterization Report to EPA/DEC –Dec 16, 2002
4. Submit Airport System RA Work Plan to EPA/DEC –Oct 29, 2002
5. Submit Industrial Park East RA Work Plan to EPA/DEC –Dec 20, 2002
6. Submit North Street RA Work Plan to EPA/DEC – Dec 12, 2002

7. Submit LIPA System RA Work Plan to EPA/DEC – June 12, 2003
8. Submit OU IV Deletion Report to DOE – Oct 24, 2002
9. Submit OU IV Deletion Report to EPA/DEC Feb 6, 2003
10. Submit OU VI Remediation System RA WP to EPA/DEC – Oct 10, 2002
11. Submit UGP Draft Completion Report to Regs for R&C –Nov 20, 2002
12. Submit Draft Chem Holes C/O Rept to EPA/DEC – April 8, 2004
13. Submit Ash Pit RD/RA Work Plan to EPA/DEC – Nov 3, 2003
14. Submit Draft Ash Pit C/O Rept to EPA/DEC - Jun 4, 2004
15. Submit Meadow Marsh Work Plans to EPA/DEC – Dec 01, 2003
16. Submit Meadow Marsh Closeout Rept to EPA/DEC – Jun 21, 2004
17. Submit Sr-90 90% design to EPA/DEC – May 6, 2004
18. Submit Sr-90 RA Work Plan to EPA/DEC – July 19, 2004
19. Submit STP Closeout Rept to EPA/DEC – Mar 31, 2003
20. Complete Disposal of EM Liability Waste – Sept 30, 2004

Table 2 FY02 Major Project Starts

DESCRIPTION - DATE	COMPLETION CRITERIA	BASELINE ACTIVITY ID & DESCRIPTION
1) Bld. 811 USTs Mobilization - 3/15/2002	Kick-off meeting held, all physical work prerequisites complete and contractor issued Notice to Proceed.	010449 – Bldg. 811 Mobilization
2) Bldg 650 S/O Mobilization – 10/22/01	Kick-off meeting held, contractor(s) issued Notice to Proceed for clearing and grubbing, supplemental investigation and overburden removal, contractor onsite mobilizing equipment.	010495A - Bldg. 650 Mobilization
3) Mobilize and Sort Stockpile 7 –7/3/02	Kick-off meeting held, contractor(s) issued Notice to Proceed, contractor on-site mobilizing equipment.	011048 – Mobilize and Sort SP 7
4) Mobilize and Sort Stockpile 4 and 15 – 8/1/02	Kick-off meeting held, contractor(s) issued Notice to Proceed, contractor on-site mobilizing equipment.	010987A30 – Mobilization/Sorting SP 4-15
5) Construct Permanent Sediment Trap – 2/4/02	Staging area is laid out, upstream debris cleared, DEC equivalency permit issued and all physical work prerequisites complete. Rip rap material is staged adjacent to river bed and placement of geotextile material on the river bed has been initiated.	050670DE – Install Silt Trap
6) Initiate Remediation of STP Beds and Berms – 6/18/02	Contractor issued Notice to Proceed, contractor mobilized, remediation area Surveyed and delineated for contamination extent removal, excavation of soil has been initiated.	050454H – Remediate STP Berms
7) Middle Road Remediation System Start-Up – 11/08/01	The system is complete, specifically all major components are operational. The Operational Readiness Evaluation has been completed and any items identified as pre-start items in the ORE are completed.	Related To 03 M0550 – Prepare Startup Report Middle Road
8) Construction of Western South Boundary System – 10/1/01	The remedial Action Work Plan has been submitted, notice to proceed has been issued to the contractor, kickoff meeting held, contractor is mobilized	03WS145 – Construction SWB
9) Construction of Sr-90 Pilot System – 5/15/02	Kick-off meeting held, contractor(s) issued Notice to Proceed, contractor on job site	03S9030 – Construct Sr-90 Pilot System
10) Underground Filter Removal – TBD	Readiness review document completed (includes technical work documents, RWPs work permits, JSAs) and closure of any open items identified during the review. Physical work has been initiated.	BGBG0136 – Remove Filters (16 Sections)
11) Liner Removal – TBD	Readiness review document completed (includes technical work documents, RWPs work permits, JSAs) and closure of any open items identified during the review. Physical work has been initiated.	BGBG3520 – Remove & Dispose North Liner Phase I
12) Underground Cooler Removal – 11/30/01	Readiness review document completed (includes technical work documents, RWPs work permits, JSAs) and closure of any open items identified during the review. Physical work has been initiated.	BGBG0081 – Remove Coils (Remove & Fix cut & Plug)

Critical Outcome 3.0 Laboratory Management and Operations

BNL WILL MANAGE AND ENHANCE OPERATIONS AND MANAGEMENT PROCESSES TO PROVIDE AN EFFECTIVE AND EFFICIENT WORK ENVIRONMENT THAT ENABLES THE EXECUTION OF THE BNL MISSION IN A MANNER RESPONSIVE TO CUSTOMER AND STAKEHOLDER EXPECTATIONS.

The weight of this Outcome is 32% of total.

Objective 3.1 Management and Business Processes

The weight of this Objective is 55% of total.

BSA will develop, implement, evaluate, and improve management tools and processes to attract, hire and retain a highly qualified and diverse workforce and enable the workforce to effectively and efficiently support the Laboratory scientific and cleanup missions.

Measure 3.1.1 Assessment and Improvement

The weight of this Measure is 70%.

3.1.1.1 Overall Evaluation of the Laboratory Self-Assessment Program

The weight of this Measure is 90%.

Purpose and Supporting Information

BSA is committed to rigorous and candid self-assessment in order to monitor performance and promote early identification and resolution of issues that may impact achievement of the Laboratory's organizational performance objectives. In FY02, BSA and the DOE agreed to enhance the role of the Laboratory's self-assessment process in performance-based management.

BSA will coordinate and conduct an overall evaluation of the Laboratory's Assessment Program. The evaluation team will include DOE representatives (BAO and others selected by BAO), BSA Representatives and "peer reviewers" from other Laboratories.

The evaluation will consider the "approach/definition, deployment/implementation, and improvement/ results" of Laboratory assessment processes which include Line management (organizational assessments), management system (programmatic assessments), and independent assessments (which can either look at programmatic or organizational performance). Substantive (as distinguished from self assessment process) performance determined from self-assessment activities defined by SAMs may also be considered in the evaluation of the Laboratory's self-assessment program where this substantive performance provides indication of the quality of the self-assessment program. *Note: Independent assessments are considered to be those assessment activities managed by the BSA Internal Audit and Independent Oversight organizations.*

Note: A process/protocol for conducting the evaluation of the self-assessment program including criteria for determining the performance rating will be developed by BSA and DOE/BAO by 3/31/02. Upon completion, the process will be included in Appendix B either directly or by reference.

Performance Level Metrics

As determined by the evaluation process/protocol.

3.1.1.2 Enhance Evaluation of Management Systems

The weight of this measure is 10%.

Purpose and Supporting Information

Verification of the Quality Assurance Program (QAP) was planned for FY01. One of the strategies used in the development of the evaluation approach was to develop a process that could be used as a tool in the continuous improvement process of other Laboratory management systems. The verification process was designed to initially evaluate the maturity of the eight management systems/processes that support the QAP. The Verification was not completed in FY01. However, the work done to develop an evaluation method for management systems has been fruitful in that this method will be evaluated for incorporation into the Laboratory Assessment Program.

The FY02 measure will focus on performing evaluations on the five remaining management systems and generating a summary report of all eight management system evaluations and the state of the BNL QAP. In addition, the management system evaluation process will be refined based on the experience gained through the QAP Verification. The remaining five management systems include:

- Integrated Assessment Program
- Training & Qualifications Management System
- Records Management System
- Quality Management System
- Human Resources Management System – R2A2 Process

A Management System Evaluation consists of the following:

- Establishment of an evaluation team.
- Development of an Information Package about the performance and operation of the management system

- Conducting an Evaluation Workshop to score the maturity of the MS.
- Generation of a report documenting the evaluation process and results.

A single MS evaluation is complete once the final report of that evaluation is issued.

Performance Level Metrics

Outstanding	All 5 remaining MS evaluations are complete and the Summary Report on the QAP Verification is issued.
Excellent	4 MS evaluations are complete.
Good	3 MS evaluations are complete.
Marginal	2 MS evaluations are complete.
Unsatisfactory	Less than 2 MS evaluations are complete.

Measure 3.1.2 Business Processes

The weight of this measure is 25%.

3.1.2.1 Baseline Study of Laboratory Business Systems

The weight of this measure is 50%.

Purpose and Background

BSA seeks to continuously improve the effectiveness and efficiency of the Laboratory's business processes. Over the past several years, improvements have been made to the business management tools and infrastructure (i.e., Peoplesoft, etc.). A natural progression, following these investments, is the identification of key operational measures and indicators that can be used to monitor and evaluate performance of these systems. This measure is focused on an effort to baseline/benchmark management processes and systems to identify the set of indicators that collectively can be used to evaluate the ongoing effectiveness and efficiency of the Laboratory business related management systems.

Measure

BNL and DOE/BAO will partner to perform a baseline study that identifies those Management Systems that can be effectively compared.

Performance Level Metrics

Outstanding	Study partially implemented.
Excellent	Study completed with specific indicators identified.
Good	Study is scoped.
Marginal	Study is not scoped.
Unsatisfactory	No progress.

3.1.2.2 Work-for-Others (WFO) Business Systems

The weight of this measure is 50%.

Purpose and Background

Approximately 20 percent of Laboratory research funding comes from Work for Others (WFO), with well over half related to non-DOE research interests (NIH, NASA, etc.). Assessment activities have indicated the need to enhance the WFO business and information management processes, primarily associated with the billing system. These measures are focused on improving the billing system and the development of a database that will be shared between the DOE/BAO and the Laboratory in accordance with the Office of Science's 2001 Report and in accordance with BNL's FY 2001 Self-Evaluation of WFO-Federal. This database will aid in ensuring that information used in the billing process essential to both the Laboratory and DOE are accurate and current.

3.1.2.2.1 Improve WFO Billing System

Performance Level Metrics

Outstanding	WFO Billing System owned and operated by BNL.
Excellent	WFO Billing System has improved but short of full BNL ownership.
Good	WFO Billing System reconciles satisfactorily monthly.
Marginal	WFO Billing System continues to experience missing data and incomplete information.
Unsatisfactory	WFO Billing System had material errors.

3.1.2.2.2 Develop WFO Database

Performance Level Metrics

Outstanding	Shared database is completely operational.
Excellent	Shared database plan completed.
Good	Shared database scoped.
Marginal	Shared database is not fully scoped.
Unsatisfactory	No progress in planning of a shared database.

Measure 3.1.3 Workforce/Diversity

The weight of this measure is 2%.

Purpose and Supporting Information

As a Federal Contractor, the Laboratory has the responsibility to take affirmative action to recruit diverse people--women, minorities and people with disabilities. Special efforts should be taken to diversify higher-level positions such as in the Official and Managers and Professional job categories, which have been identified as underutilized.

Annually, Human Resources and the Diversity Office develop a recruitment program targeting underrepresented people. Of particular interest for BSA is to improve the representation in managerial and professional positions. Internally, one-on-one meetings with management, as well as meetings with Laboratory Committees and training classes for managers, are conducted to increase the awareness of the manager's responsibility for affirmative action.

To support these efforts, the Laboratory provides funds to the Diversity Office. The Diversity Initiative, Professional Associates Program, Science and Engineering, and similar programs offer complimentary funding to departments for recruiting and hiring underrepresented people.

This measure serves to ensure these initiatives are effective in ensuring the availability of viable diversity candidates in the pool of individuals applying for managerial and professional positions.

Measure

Percentage improvement from average of 1998 and 1999 position openings in "Officials & Managers" and "Professionals" for which at least one viable diversity candidate was included in the applicant pool

Performance Level Metrics

Outstanding	10% or more improvement.
Excellent	5% - 9.9% improvement.
Good	Maintain current level + or – 4.9%.
Marginal	5% - 9.9% decline.
Unsatisfactory	10% or more decline.

Measure 3.1.4 Corporate Involvement

The weight of this measure is 3%.

Purpose and Supporting Information

Brookhaven Science Associates believes that active corporate involvement is a critical success factor in the management of BNL. To implement this, BSA is committed to the following types of activities at BNL:

- Providing highly skilled candidates for senior management positions at the Laboratory.
- Providing proven management systems and processes for enhancing business operations.
- Facilitating the implementation of these with long-term assignments of key leaders and short-term assignments of subject matter experts.
- Conducting management assessments in various areas of Laboratory operations.
- Providing strategic guidance to the science, technology and cleanup missions of the Laboratory.
- Facilitating the exchange of ideas and practices between other organizations affiliated with BSA corporate partners that bring benefits to DOE and/or BNL.

Metrics

Performance relative to each item will be determined as acceptable or unacceptable. Performance related to the measure, as a whole, will be determined as follows:

Outstanding	All 6 items determined acceptable.
Excellent	5 of the 6 items determined acceptable.
Good	4 of the 6 items determined acceptable.
Marginal	3 of the 6 items determined acceptable.
Unsatisfactory	2 or less of the 6 items determined acceptable.

Laboratory Management and Operations Supporting Assessment Measures (SAMs)

Combined with the specific performance measures discussed above, these activities define the scope of planned institutional level assessments that support BSA's Management and Business Processes Objective. Performance relative to these assessments is considered in the evaluation of the Laboratory's self-assessment program addressed under Measure 3.1.1.1, Assessment and Improvement.

Human Resources: BSA will conduct assessments of the benefits and compensation programs to ensure consistency with appropriate benchmarks and best practices to enable attracting and retaining a world-class research staff and highly competent support staff.

Legal services: BSA will consider the following indicators to evaluate the effectiveness and efficiency of Legal services:

- Innovative improvements to Laboratory's Legal Services.
- Timeliness and quality of work products submitted for DOE approval and use are supported by timely, sound, and thoroughly researched legal advice.
- Consideration of thoughtful alternative dispute resolution (ADR).
- Compliance with DOE approved legal management procedures.

Note: specific measures and expectations associated with the Legal Service SAM will be provided to the Laboratory in writing by the Contracting Officer (CO)

Property Management: BNL will conduct a comprehensive review of the Laboratory's property management processes used for control and accountability of the Government's assets. A Balanced Scorecard (BSC) plan will be used as the primary self-evaluation tool.

Procurement Management: BNL will conduct a comprehensive review of the control and accountability of the Laboratory's procurement business processes. A Balanced Scorecard (BSC) plan will be used as the primary self-evaluation tool.

Requirements Management: A cornerstone of SBMS is the requirements management process, which systematically links external regulatory requirements to internal management processes and procedures. BSA will conduct an assessment to determine the effectiveness of this process.

Technology Transfer BSA will consider the following information to evaluate the effectiveness of Technology Transfer processes:

Agreements: Level of customer satisfaction as derived from annual CRADA and Non-Federal WFO customer satisfaction surveys.

Intellectual Property: (1) Level of patent licensing activity as measured by the amount of licensing related revenue received by the Laboratory and the quality of BSA patent properties as measured by the percentage of patent properties that have been licensed; (2) Utilization of appropriate mechanisms to protect Laboratory-generated data and degree of interaction with DOE Patent Counsel regarding Intellectual Property data rights issues.

Training and Qualifications: BSA will use the following indicators to monitor the status of satisfying training and qualification requirements for Laboratory employees and transient staff. Management action will be taken to address significant deviations from expected performance trends:

- % of individuals linked to job-specific training assessments.
- % of training and qualification requirements completed by staff.

Uncosted Balances: BSA will monitor the percentage of uncosted operating balances of SC and EM funding (approximately 85 percent of DOE funding for BNL) to operating funds received in the financial plan. Management action will be taken to ensure uncosted operating balances are maintained at levels needed to ensure continuity of operations (expected target <10%).

Work-for-Others (WFO), Federal and Non-Federal: BNL will evaluate WFO customer satisfaction and proposal processing cycle time. The March 16, 2001, Office of Science Review will be used as guide for this evaluation. Additionally, BSA will monitor progress towards the preparation of a document that summarizes all of the requirements of the WFO Program including Federal programs.

Objective 3.2 Environment, Safety, and Health

BNL will develop, implement, and continuously improve management systems, processes, and services to effectively and efficiently manage environment, safety, and health risks associated with the legacy vulnerabilities and work associated with support of ongoing Laboratory mission activities.

The weight of this Objective is 15%.

Measure 3.2.1 Legacy ES&H Risk Management

The weight of this measure is 30%.

3.2.1.1 Site Hazard Footprint Management

The weight of this measure is 50%.

Purpose and Supporting Information

Long-term legacy ES&H risk management requires assurance that site hazards are primarily associated with on-going mission or mission support activities. Site hazards that are not associated with on-going work can present significant legacy vulnerabilities. They also present inefficiencies because the resources and attention required to effectively manage the hazards detract from work that is clearly connected to the Laboratory mission.

This measure is intended to begin establishing a "hazard footprint" for conditions that are not directly related to achieving the Laboratory mission and have not been transitioned to EM for disposition/ resolution. In the context of this measure, a "footprint" is defined as records in the form of drawings, databases, and other documents, which collectively define the scope of hazard sufficient to enable effective management (i.e., location, source term, volume, etc.) and definition of areas regarding future decommissioning needs. The focus will be on establishing the footprint for radiological hazards.

Non-mission related radiological hazards will be identified through field walk-throughs; interviews with current and former employees; document review and limited characterization surveys; and identified on-site plans as appropriate. Buildings will be prioritized based on knowledge and experience of the BNL Radiological Controls Division. The following buildings are scheduled to be base-lined in FY02:

- 490 Medical
- 463 Biology
- 801 EENS/Medical
- AGS Lead Yard
- AGS Steel Yard
- AGS Block Yard
- Greenhouses
- Large Animal Facilities
- 830 EENS
- 555 Chemistry
- 462 Hot Shop

Once the footprint is established, management processes can be developed and action can be taken to address specific issues. This initiative is a natural continuation of the facility review project because it develops and implements management processes designed to aid in the prevention of the need for any such site-wide initiative in the future.

Measure

Baseline Radiological Footprint

Performance Level Metrics

Outstanding	footprint established for >= 90 % of priority buildings
Excellent	footprint established for 80-89% of priority buildings
Good	footprint established for 60-79% of priority buildings
Marginal	footprint established for 40-59% of priority buildings
Unsatisfactory	footprint established for < 40% of priority buildings

3.2.1.2Chemical Disposition Upon Employee Termination

The weight of this measure is 50%.

Purpose and Supporting Information

Proper and timely disposition of the chemicals when employees are terminated minimizes the potential for generation of future legacy risks. Laboratory termination processes contain checks to ensure transfer of responsibilities for the management of chemicals when employees are terminated. This measure is focused on evaluating the adequacy and effectiveness of those processes.

The following approach will be used:

- Measure the percentage of terminated staff with 100% disposition of assigned chemical containers within one month of termination date.
- All terminations that occurred within the previous12 months will be evaluated.

Performance Level Metrics

	Score
Outstanding	>90 % of terminated staff with all chemicals dispositioned
Excellent	80 – 90 % of terminated staff with all chemicals dispositioned
Good	70 – 79.9 % of terminated staff with all chemicals dispositioned
Marginal	60 – 69.9 % of terminated staff with all chemicals dispositioned
Unsatisfactory	<60 % of terminated staff with all chemicals dispositioned

Measure 3.2.2 On-going ES&H Risk Management

The weight of this Measure is 70%.

3.2.2.1 Pollution Prevention

The weight of this Measure is 20%.

Purpose and Supporting Information

Investment in pollution prevention can help BSA save money, create a safer workplace, and help protect the environment at the same time. The Laboratory's Pollution Prevention (P2) is focused on incorporating P2 into work planning (facility design, experimental review, process assessment, and work planning).

Proposals for funding pollution prevention opportunities are submitted to the Laboratory Pollution Prevention Council based on several factors, including funding availability, return on investment, and achieving goals associated with specific waste streams. Project plans are developed to an appropriate level based on complexity for funded P2 projects.

This measure focuses on driving site-wide involvement in the Pollution Prevention Program. It will help develop a rich database of pollution prevention opportunities so when funding becomes available we are prepared to take advantage of the opportunity. It enhances the communication of best practices and lessons learned. Additionally, having clear evidence of site-wide management commitment to, and, implementation of, Pollution Prevention initiatives, helps the Laboratory to be recognized as leaders in the DOE community and improves our chances of obtaining additional pollution prevention funds.

Measure

Each organizational unit must demonstrate active involvement in the BNL Pollution Prevention Program. For the listed organizational units (see list below), "Demonstrating involvement" is evidenced by submitting at least two pollution prevention project proposals to the P2 Council and/or two success stories

and/or lessons learned stories. Other organizational units not specifically listed shall demonstrate involvement by establishing a pollution prevention objective in their organization's EMS Program.

List of organizations that must submit P2 Proposals and success stories/lessons learned:

Basic Energy Sciences Directorate
EENS Directorate
Environmental Management Directorate
Facilities and Operations Directorate
Finance and Administration Directorate
High Energy & Nuclear Physics Directorate
Life Sciences Directorate

Performance Level Metrics

Outstanding	90% of organizational units demonstrated involvement in the P2 Program.
Excellent	80-89% of organizational units demonstrated involvement in the P2 Program.
Good	70-79% of organizational units demonstrated involvement in the P2 Program.
Marginal	60-69% of organizational units demonstrated involvement in the P2 Program.
Unsatisfactory	50-59% of organizational units demonstrated involvement in the P2 Program.

3.2.2.2 Transportation Safety Implementation

The weight of the Measure is 30%.

Purpose and Supporting Information

In FY00, BAO performed an assessment of the Laboratory's Radioactive Material Transportation Safety Program. The assessment indicated substantial regulatory vulnerabilities associated with transportation safety of radioactive and hazardous materials, particularly with transportation of those materials on site. Additionally, there were several occurrence reports related to transportation issues at BNL.

BSA responded by developing a Transportation Safety Re-engineering Project Plan. The project was focused on defining the Laboratory program. It was completed in FY01 and an implementation plan was developed. To ensure the program is effectively deployed and implemented, focus needs to continue through FY02. The purpose of this measure is to satisfactorily complete key milestones associated with field deployment/implementation which are scheduled for FY02, and prepare the Laboratory for a DOE independent assessment of the Transportation Safety Program required by DOE Order 460.2.

3.2.2.2.1 Complete the Following Milestones

The weight of this measure is 50%

- Develop and implement hazardous material training for Contractor Vendor Orientation, General Employee Training and General Awareness Training by 11/30/01.
- Complete development of a "Hazardous Material Transportation" web site to facilitate communication of hazmat requirements to the staff by 1/30/02.
- Identify personnel who need the general awareness training and train them, and modify their Job Training Assessments (JTA's) as appropriate by 3/30/02.
- Identify, prioritize, and schedule Safety Assessment Methodologies (SAMs) needed throughout the departments/divisions to cover current transportation activities by 3/30/02.

Outstanding	4 of 4 completed ahead of schedule.
Excellent	3 of 4 completed within 30 days of scheduled due date.
Good	2 of 4 completed within 30 days of scheduled due date.
Marginal	1 of 4 completed within 30 days of scheduled due date.
Unsatisfactory	None completed within 30 days of scheduled due date.

3.2.2.2.2 Develop Safety Assessment Methodologies (SAM's) Schedule for FY02
The weight of this measure is 50%

Performance Level Metrics

Outstanding	100% of SAM's completed ahead of schedule.
Excellent	90-99% of SAM's completed in accordance with the HMTM within 14 days of scheduled due date.
Good	80-89% of SAM's completed in accordance with the HMTMwithin 14 days of scheduled due date.
Marginal	70-79% of SAM's completed in accordance with the HMTMwithin 14 days of scheduled due date.
Unsatisfactory	<70% of SAM's completed in accordance with the HMTMwithin 14 days of scheduled due date.

3.2.2.3 OSHA Reportable Injury Management

The weight of this measure is 30%.

Purpose and Supporting Information

BNL seeks to achieve excellence in worker safety and health protection through its Integrated Safety Management Program. Although a lagging indicator of performance, the frequency and severity of worker injuries provide management information regarding the effectiveness of the Laboratory's Integrated Safety Management System. BNL will seek to improve the following reportable rates:

Total Recordable Case Rate (OSHA Recordables) TRCR
Lost Workday Case Rate (LWCR)
Lost Work Day Rate (LWDR)

Where:

$$\text{TRCR per 100 FTEs} = \frac{\text{Number of OSHA reportable injuries/illnesses x 200,000}}{\text{Total Hours Worked}}$$

$$\text{LWCR per 100 FTEs} = \frac{\text{Number of Lost Workday Cases x 200,000}}{\text{Total Hours Worked}}$$

$$\text{LWDR per 100 FTEs} = \frac{\text{Number of Days Away From Work+Restricted Days x 200,000}}{\text{Total Hours Worked}}$$

The following Table reflects expectations in these areas. The metrics used for this performance measure are derived from the DOE 5-year averages published on *CAIRS Table S3, Injury and Illness Ranking of Research Contractors.* The metric compares the most recent complete BNL calendar year data to the DOE 5-year Research Averages on the same S3 Table (e.g., for 2001, 1996 through 2000).

Table 1

Metric/Weight	Outstanding	Excellent	Good	Marginal	Unsatisfactory
TRCR/0.33 **LWDR/0.33** **LWCR/0.33**	<30%	<15% to 30%	+/-15% of Mean	>15% to 30%	>30%

Table 2

Score	Performance for TRCR, LWCR & LWDR
4	<30% of Mean
3	<15% to 30%
2	+/- 15%
1	>15% to 30%
0	>30%

Composite Score = TRCR score x .33 + LWDR score x.33 + LWCR score x .33

Table 3

Rating Level	Composite Score Based on Table 2
Outstanding	3.5 – 4.0
Excellent	2.5 – 3.49
Good	1.5 – 2.49
Marginal	0.5 – 1.49
Unsatisfactory	<0.5

3.2.2.4 Chemical Safety Performance

The weight of this measure is 20%.

Internal and external assessment activities have indicated the need for the Laboratory to continue focusing on chemical management operational performance. Laboratory requirements, processes and tools are intended to ensure clear accountability and control of chemical inventories. This measure is intended to evaluate the effectiveness of those processes and tools in managing chemical risks.

3.2.2.4.1 Chemical Inventories and Accountabilities

BNL will seek to ensure that chemical containers are properly inventoried. The following approach will be used:

- Survey all containers in seven rooms - (Use lottery to select departments/divisions/rooms). Note: The definition of "container" and "room" are consistent with 29 CFR 1910.1200. No more than one test per organization.

- Survey will be limited to rooms with more than 50 chemical containers. If the room contains more than 400 containers, the room will count as two rooms.
- BNL and BAO will jointly participate in the compilation and evaluation of this data.
- The field verification will be unannounced.

The following Table reflects expectation in this area where the composite score is determined by 70% of the percentage of containers with barcodes plus 30% of the percentage of bar coded containers assigned to the correct owners (current staff or visitors at the time of field verification). The following equation will be used to determine the composite score:

$$[\sum_{i=1}^{n}((0.7)(C_{Bi})+(0.3)(C_{Oi}))]/n$$

C_{Bi}= % of containers with barcodes for the i_{th} room.
C_{Oi}=% of containers for the i_{th} room assigned to correct owners
n= # of rooms

Performance Level Metrics

Composite Score

Outstanding	>90 %
Excellent	80 – 90 %
Good	70 – 79.9 %
Marginal	60 – 69.9 %
Unsatisfactory	<60 %

3.2.2.4.2 Peroxide Forming Compounds

The potential for peroxide forming compounds in Laboratory chemicals presents particular risks for the Laboratory environment. This measure is intended to ensure that peroxide forming chemicals are being managed in accordance with Laboratory requirements.

BNL will ensure the proper storage and control of peroxide forming chemical containers as per BNL ESH Standard 2.1.1. The following approach will be used:

- Survey all peroxide forming compound containers in five rooms from the pool of rooms that CMS indicates contain a chemical from Table 1 of ESH 2.1.1 (Use lottery to select departments/divisions/rooms).
- No more than 1 test per organization.
- BNL and BAO will jointly participate in the compilation and evaluation of this data.
- The field verification will be unannounced.
- Measure the percentage of containers properly labeled, stored, and tested.

Performance Level Metrics

Score

Outstanding	>90 %
Excellent	80 – 90 %
Good	70 - 79.9 %
Marginal	60 - 69.9 %
Unsatisfactory	<60 %

Environment, Safety, and Health Supporting Assessment Measures

Combined with the specific performance measures discussed above, these activities define the scope of planned institutional level assessments that support BSA's ES&H performance objective. Performance relative to these assessment activities is considered in the evaluation of the Laboratory's self-assessment program addressed under Measure 3.1.1.1, Assessment and Improvement.

Environmental Compliance: The Laboratory has established a program to evaluate compliance to applicable regulations on a three-year cycle. The focus of the Laboratory's programmatic assessment in this area during FY02 will be in the following areas:

- Air Emissions (radioactive and non-radioactive; i.e., Clean Air Act and NESHAPs)
- PCB Management

Maintain ISO 14001 Registration: BSA has committed to maintaining BNL's ISO 14001 Environmental Management System registration to satisfy requirements in the BSA/DOE contract and the DOE/EPA Memorandum of Agreement (3/98). In order to maintain the registration certificate, the Laboratory will undergo a surveillance audit in Spring 2002. Two independent auditors will conduct a four-day audit covering a subset of the EMS Program requirements.

Note: Internal programmatic assessments of select EMS Program requirements will be conducted as part of the QA Program Verification of key Management Systems (see measure 3.1.1.2 for further description).

Progress Toward Accelerator Authorization Basis Upgrades: BSA has a 5-year schedule for upgrading accelerator authorization basis documents to fully conform to current requirements and expectations. BSA will review progress towards this and take management action, as necessary, to ensure progress is made to complete the upgrade in accordance with the June 23, 2000 Accelerator Facilities Implementation Plan and SBMS requirements.

Radiological Control: BSA is required to conduct a comprehensive assessment of the Radiological Control Program over a three-year period. In FY02, the Laboratory programs and implementation will be assessed in the following areas:

- ALARA Program
- Organization and Administration
- External Dosimetry
- Radiological Dose Reports to individuals
- Emergency Exposure Situations
- Instrumentation and Calibration
- Release Criteria

In addition to those assessment activities, BSA will consider the following indicators for evaluation of the Laboratory's ALARA Program. Management action will be taken to address deviations from expected performance trends.

- Personnel Contamination Events
- Radioactive Exposures

Recycling of Solid Waste: BSA will monitor the solid waste recycling rate based on established and accepted performance measures to continue as an active participant in Brookhaven Town's Solid Waste Recycling Program. Management action will be taken (e.g., improve employee awareness through communication with BNL employees via our custodial workforce, Brookhaven Bulletin, Monday Memo, etc.) as appropriate to improve the percentage of solid waste recycled.

Regulated Waste Management: BSA will monitor and evaluate the following indicators to evaluate regulated waste management activities. Management action will be taken to address significant deviations from expected performance trends:

- Track and trend waste generation rates for routine and non-routine waste streams. Communicate results to Laboratory management and waste generating organizations.
- Assess compliance of BNL waste accumulation activities by assessing compliance at all 90-day accumulation areas and a representative sampling of Satellite Accumulation Area's (SAA's).
- Assess compliance with DOE Order 435.1, Radioactive Waste Management, WMD's 435.1 Implementation Plan, and the BNL Radioactive Waste Management Basis Document.
- Perform all regulatory reporting on time.

Safety and Health: In the area of safety and health, BSA will evaluate elements of the Laboratory programs and implementation for the analysis and controls for the following:

- Design Review Program
- OSHA Regulated Carcinogens
- NFPA 70E Compliance
- Biohazards/Biotoxins
- Construction Safety Inspection
- Industrial Exhaust Ventilation

Worker Involvement in Work Planning and Control: A critical element of Integrated Safety Management is the involvement of workers in work planning and control activities. BSA conducted baseline surveys in FY1999 and FY2000. A reassessment will be conducted as a measure of the worker's perspective of their involvement in work planning and control activities. The results will be evaluated to help direct management response to observed trends.

Objective 3.3 Site Infrastructure, Facilities, and Operations

The weight of this Objective is 10%.

BNL will maintain and improve the efficiency and reliability of the site infrastructure and manage projects to upgrade site facilities to meet the objectives of the Strategic Facility Plan and Master Site Plan. Site operations will be managed to ensure effective protection of personnel, property, the general public, national security interests, proprietary information, classified matter, and sensitive unclassified information.

3.3.1 Pursue Alternative Financing for Infrastructure Projects

The weight of this Measure is 30%.

Purpose and Supporting Information

It is apparent that available infrastructure funding at BNL (capital replacement, capital renewal) is not adequate to meet past, current and future needs. Under funding of infrastructure has persisted throughout the 1990's and has resulted in very large backlogs of infrastructure requirements. Therefore, BSA will continue to evaluate whether "third-party" (non-DOE) project funding is available, feasible and should be used to meet selected infrastructure needs.

Depending on the nature of the project, third-party funding could come from a variety of sources, including energy services performance contractors (ESPC's), utility energy services contracts (e.g., with NYPA, LIPA, KeySpan), private sector developers, BSA financing, New York State financing, or grants from other government (non-DOE) agencies.

We believe that the most attractive method of funding an infrastucture need at BNL is through "direct" federal funding (construction/operating funds) of the project or need. Absent that funding, third-party funding may be an acceptable means of accomplishing needed projects. Our criteria for using third-party funding is:

- No DOE or BNL funding available for the project.
- Project investment could be repaid using the savings resulting from project implementation – preferably from investments with less than a five-year payback (future operating funds would not be "mortgaged.")
- The project could be repaid by available/related revenues paid by willing "customers" deriving direct benefits (e.g., space charges on new or renovated space) and other benefits accrued to the Laboratory

(attracting new research, improved user experience, improved image, improved quality of work-life for employees).

- The project is deemed by BSA to be essential to continued Laboratory operations and no reasonable alternative funding exists (e.g., available funding committed to equal or higher priority projects).

BSA has already begun to seek opportunities to use "third-party funding beginning in FY2001. This measure will drive BSA's continued commitment to on-going efforts.

Measures

- Make opportunities known to potentially interested parties through solicitations, advertisements, targeted letter writing, and other interactions - 1 point awarded per solicitation, advertisement, letter campaign, etc.

- Meet with and work with "third-parties" to investigate and develop economically attractive projects - 2 points awarded per formal discussion/negotiation with a third-party.

- Enter into agreement or contract to fund (or partially fund) and/or develop an acceptable/feasible third-party funded project(s) at BNL - 8 points awarded per third-party project.

Performance Level Metrics

Performance on this Third-Party Project (TPP) effort will be evaluated by adding the above point values for efforts in FY2002, as follows:

Outstanding	=>8 points
Excellent	=7-8 points
Good	=5-6 points
Marginal	=3-4 points
Unsatisfactory	=<3 points

3.3.2 Project Management

The weight of this Measure is 70%.

Purpose and Supporting Information

In a regime of very scarce infrastructure resources, BSA will manage its construction and construction-like projects to ensure scope, schedule and cost objectives are readily met. Approved projects are completed on time, within budget, and meet baseline expectations. Uncosted carryovers are minimized.

This performance measure is for all capital-funded construction projects, excluding Strategic Systems (formerly Major Projects and Major Systems Acquisitions) and EM Projects. It is measured as a composite that accounts for the percent of capital funds committed and costed per fiscal year, the percent of projects on schedule, and the number of capital construction projects with scope completed within the Total Estimated Cost (TEC). The formula for calculating the performance is:

PROJECT RATING (PM): $(PM) = 0.2\ (a^1 + a^2) + 0.2\ (b^1 + b^2) + 0.2\ (c)$

Each variable is discussed below as separate measures:

3.3.2.1 Funds Committed: (a^1)

(a^1) = *Actual Funds Committed*
Total Planned Funds Committed

Description of Proposed Method

Actual Present Year Funds [Line Item + GPP] Committed
Total Planned [Line Item + GPP] Committed

Notes

1. Measure funds commitment performance only for funds received in the fiscal year being measured.

2. Total planned funds committed excludes planned contingency funds (usually about 12 percent).

3. Only planned (requested) project funds will be included.

4. Funds committed (obligated) will continue to be measured when contracts and PO's are "pinned," as reflected in the B&E Report.

3.3.2.2 Funds Costed: *(a^2)*

(a^2) = *Actual Funds Costed*
Total Planned Funds Costed

Description of Method

Actual Present Year Funds [Line Item + GPP] Costed
Total Planned [Line Item + GPP] Costed

Notes

1. Measure funds costed performance for funds received in fiscal year being measured.

2. Only planned (requested) project funds will be included.

3.3.2.3 Project Schedule Compliance (GPP and IHEM): *(b^1)*

(b^1) = *No. of GPPs Completed on Schedule*
No. of GPPs Scheduled to Complete

Description of Method

1. BNL and DOE agree on actual completion milestone dates and document and track them in the Plant Engineering Monthly Project Report.

2. List all GPP and IHEM projects with TEC >$300K and completion milestone falling in current fiscal year.

3. Determine how many were completed on-time using construction "substantially complete" as complete.

4. "Substantially complete" means project is ready for beneficial occupancy or use, as described in the

Project Management Control System.

Notes

1. GPP and IHEM project schedules will be established in cooperation with BHG in continuation of current approval process.

3.3.2.4 Project Schedule Compliance (Line Item): (b^2)

$$(b^2) = \frac{\text{No. of Line Item Milestones}(^1)\text{ Completed on Schedule}}{\text{No. of Line Item Milestones}(^1)}$$

(1) Key controlled Milestones

Description of Method

- BNL and DOE agree on actual baseline completion milestone dates and document and track them in the Plant Engineering Monthly Report.
- List all Line Item projects with key controlled milestones falling in the current fiscal year.
- Determine current year milestones completed on or ahead of schedule.

Notes

1. Key controlled milestones are those described in the approved Project Management Plan:
2. Design Start
   - Design Complete
   - Construction Start
   - Construction Complete
3. Construction complete is defined as "substantially complete."
4. "Substantially complete" means project is ready for beneficial occupancy or use as described in the Project Management Control System.

3.3.2.5 Scope Completed Within Approved Baseline (Line Item, GPP and IHEM [>300K]): (c)

$$(c) = \frac{\textit{Projects completed within Approved Baseline}}{\textit{Total Projects Complete}}$$

Description of Method

1. Review Line Item, GPP and IHEM (>$300K TEC) projects completed through the fiscal year.
2. Upon project completion, determine whether project baseline scope was completed within the approved baseline Total Estimated Cost (TEC).
3. Determine the total number of Line Item, GPP and IHEM (>$300K TEC) projects completed within approved baseline (approved original project and approved baseline change proposals)

4. Determine total number of projects completed.

Calculate:

(c) = Projects Completed within Approved Baseline
Projects Completed

Notes:

1. Justifiable BCPs will be approved by DOE-BHG for legitimate scope changes or reductions (i.e., due to program changes, reasonable unforeseen project conditions, new regulatory requirements, etc.)

2. Plant Engineering is not currently managing any projects classified as "Strategic Systems" under LCAM (formerly Major Projects and Major System Acquisitions). Presently, the RHIC Project is the only such project at BNL.

Performance Level Metrics

Outstanding	=0/90 to 1.00
Excellent	=0.80 to 0.89
Good	=0.70 to 0.79
Marginal	=0.60 to 0.69
Unsatisfactory	=less than 0.60

----------Site

Infrastructure, Facilities, and Operations Supporting Assessment Measures (SAMs)

Combined with the specific performance measures discussed above, these assessment activities define the scope of planned institutional level assessments that support BSA's Site Infrastructure, Facilities, and Operations performance objective. Performance relative to these assessments is considered in the evaluation of the Laboratory's self-assessment program addressed under Measure 3.1.1.1, Assessment and Improvement.

Building Manager Program: BSA will monitor progress towards enhancement of the Laboratory's building manager program. The focus in FY 02 will be on ensuring progress in enhancing Facility Use Agreement documents and processes.

Safeguards and Security: BNL is required to conduct Safeguards and Security operations to ensure effective protection of national security interests, proprietary information, personnel, property, and the general public. To ensure these requirements are met, the BNL Safeguards and Security Division will conduct an annual self-assessment on the following elements:

- Program Planning and Management
- Protection Program Operations
- Information Security
- Material Control and Accountability
- Personnel Security

Counterintelligence: If the DOE Office of Counterintelligence or another DOE entity does not conduct an annual inspection of the CI Program, BSA/BNL will conduct an internal self-assessment on the following elements:

- Personnel Management/Resource Allocation
- Foreign Visits and Assignments
- Investigations/Liaison Activities
- CI Cyber Security
- CI Awareness
- Executive Management/Program Management
- CI Analysis/Threat Assessment

Emergency Planning and Preparedness:

Several aspects of the Laboratory's infrastructure related to emergency preparedness are aging (e.g. site siren system, plectron system, and response support centers). Site facilities and hazards have also changed. Due to the investment required for upgrades, the laboratory needs to thoroughly evaluate the associated costs and benefits. Three such analysis will be conducted in FY02. Each are briefly described below.

Evaluation of the Site Siren System: The site siren system has been in place for over 30 years. Currently it is used to inform Laboratory personnel of an emergency, and to alert emergency response personnel to report to their emergency response locations. *A* cost-benefit analysis of the site siren system will be conducted to determine if, based upon the current hazard conditions at the Laboratory, it is still a viable system.

Monitoring and Assessment Support Center (MASC): The MASC was developed and was utilized primarily for emergencies initiated by the HFBR or the BMRR. There are other radiological hazards, which still exist at BNL which can be managed out of the MASC. A cost-benefit analysis, taking into account the current hazards at BNL, will be conducted to determine if the MASC is still a viable entity, and make recommendations to either eliminate it completely or modify its functionality.

The Plectron System: One of the primary means of warning BNL personnel of lab-wide events is the Plectron tone-alert warning system. The current system is many years old and components are failing and in need of repair. Federal Communications Commission rules will be changing in the next four years to require a change in the frequencies used at BNL, including the Plectron frequency. An analysis of the usefulness of the current system will be performed. The analysis will include recommendations regarding replacement with a state-of-the art system including the ability and costs associated with incorporating the system into buildings' public address system.

Emergency Plan Consolidation:. The BNL Emergency Plan, maintained by the Emergency Services Division, deals primarily with radiological and to a lesser extent chemical hazards. A security plan maintained by the Safeguards and Security Division deals with security-related events and response. The laboratory is developing a single plan for BNL to cover all hazards including security. That information which will cause this new plan to become classified will only be incorporated by reference. BSA will monitor progress toward emergency plan consolidation and take actions as necessary to ensure timely completion of the consolidation initiative.

Energy Management: BSA will monitor building and energy consumption rates based on established and accepted performance measures to continue BNL's long history of active energy management. Management action will be taken, within the constraints of available resources, towards meeting Federal (Executive Order) and DOE goals.

Management of Maintenance Activities: BSA will continue its initiative to better understand and quantify BNL's maintenance requirements, resource shortfalls, and existing backlogs. This effort will be multi-pronged and will be aligned with DOE's efforts to better understand maintenance issues across the DOE laboratory complex.

- BSA will continue its senior facilities management initiative to perform a bottoms-up measurement of laboratory maintenance and capital renewal performed, annual needs and back-logs. We will strive to use facility management industry standard definitions, and will work with all levels of DOE to improve the consistency of maintenance reporting.

- BSA will conduct a Condition Assessment Survey (CAS) of its remaining (not surveyed in past three years) structures in FY02. This survey will allow the Laboratory to "catch up" on CAS, and will complete the three-year cycle. Buildings will be inspected using qualified, experienced personnel and "high-level, walk-through" techniques. The purpose of this inspection will be to improve BNL's maintenance backlog numbers and building condition data

- BSA will continue to populate requested fields in DOE's FIMS database. FIMS data will be quality checked to assure accuracy using statistical sampling techniques.

- BSA will respond accurately and timely to DOE-HQ maintenance data calls.

Objective 3.4 Information Technology

BNL will provide a cost effective, reliable, and secure computing/communications infrastructure for administrative computing, and support to scientific programs for unique computing problems.

The weight of this Objective is 10% of total.

Performance Level Metrics

Note:, All the measures within this objective are date driven milestones. The following metrics apply:

Metric: Each milestone will be awarded points as follows based on accomplishment of that milestone:

Outstanding	Bettering a milestone date by >30 days	4 Points
Excellent	Meeting a milestone date	3 Points
Good	Missing a milestone date by <45 days	2 Points
Marginal	Missing a milestone date by >45 days	1 Point
Unsatisfactory	Missing a milestone date by >90 days	0 Points

The evaluation of the Performance Measure will be the numerical average of the scores of the supporting milestones.

3.4.1 Cyber Security

The weight of this Measure is 55%.

Purpose and Supporting Information

BNL will maintain/improve a Cyber Security program that is designed to protect the unclassified portion of the computing and networking infrastructure from attacks originating from inside or outside the Laboratory, based on: social engineering, physical destruction of network components, or electronic attacks utilizing the network and the Internet. The program must balance the need for openness and the science mission against the security required to reduce the threats to acceptable levels. Two elements of this measure are:

- Completion of the Laboratory's computer security program according to DOE guidelines and directives,

and as documented in BNL's Cyber Security Program Plan (CSPP).

- Establishing mechanisms to test, review and evaluate the CSPP to ensure it's value as a "living document;" as such, it will continue to meet the rapidly evolving cyber security risks, with response to external/internal threats balanced appropriately against the needs of the Laboratory science mission.

Performance Measure Milestones

3.4.1.1 Cyber Security Program Plan implementation

The weight of this Measure is 50%.

1. Complete the deployment of Kerberos (token-based, single sign-on, authentication system) and the phase-out of clear-text, reusable passwords by 03/31/02.
2. To ensure an effective host-based security architecture, complete the deployment of HP Openview, with emphasis on installing agents on the scientific desktops by 12/31/01.
3. Begin implementation of the Cyber Security Application strategy developed in FY01. The strategy will address the security requirements of both mission/enterprise applications and infrastructure applications. 01/31/02

3.4.1.2 CSPP Test, Review, and Evaluation Mechanisms

The weight of this Measure is 50%.

1. Establish a formal review process for the CSPP with Cyber Security Operations, Department Chairs ("Line Management"), the Cyber Security Advisory Council (CSAC), Counterintelligence, and DOE/BAO, focused on the need for continual upgrade of the Program. 12/31/01
2. Establish a plan for utilizing the results produced by the MITTENS (Monitoring Independent Trends to Enhance Network Security) tool and distributing the resultant assessment/advice site-wide. This should include strategy for how BNL (i.e. BNL System Administrators) should respond to MITTENS output as well as a process for incorporating any newly-detected threats into the CSPP review/upgrade process. 04/30/02
3. Establish a process for the review of scientific IT requirements in order to determine those impacts on BNL's Cyber Security program that could force additional IT investments. For example, Network upgrades, driven by the requirements of scientific programs for increased bandwidth (OC12) will require hardware upgrades to maintain an effective Perimeter Defense Network. 04/30/02
4. Introduce a formal threat analysis program as described in the BNL CSPP, including a description of how results of associated risk assessments will drive changes to the CSPP. 09/30/02
5. Develop a plan for responding to the Cyber Security "paradigm shift", predicted within the next 3-5 years, i.e. a dramatic change in strategy/technology, not to be confused with "continuous improvement". Experts predict increased intensity of attacks using strategies and techniques that will greatly outpace current defense mechanisms. The plan must include mechanisms for raising Laboratory awareness as well as defining the approaches required to keep pace with technology advances -- which will affect both the threats and the defense strategies. As the Cyber Security environment changes, the Critical Assumptions on which the BNL CSPP was established will no longer be true, driving a total re-engineering of the Program. 09/30/02

3.4.2 Scientific Computing Infrastructure

The weight of this Measure is 45%.

Purpose and Supporting Information

BNL will continue to develop and maintain a scientific computing infrastructure that is fully supportive of the Laboratory's scientific mission, focusing on those areas where leveraging existing expertise and local/regional

collaborations can produce significant improvement over the current status. This includes:

- Strengthening and upgrading the existing Visualization Program to address the visualization and data analysis requirements for the major BNL scientific initiatives--in particular, for RHIC and ATLAS.
- Strengthening and upgrading the scientific computing resources present in the BNL Computing Facility (BCF), to provide strategic value to the major scientific programs at the Laboratory, as well as to local/regional collaborations.
- Inaugurating a program of New Technology Implementation Assessments (NTIAs). Within this program, a specific new information technology will be investigated for a given Laboratory program/application, by mutual agreement with program/application owner.

Performance Measure Milestones

3.4.2.1 Visualization Program

The weight of this Measure is 33.3%.

1. Implement and support a high-speed visualization system based on parallel processing techniques on a Linux Cluster platform. Milestone date: 02/28/02
2. Develop and deploy remote visualization methods using Linux clusters as visual servers with visual workstations on the scientists' desktops as clients. Milestone date: 06/30/02

3.4.2.2Computing Resources

The weight of this Measure is 33.3%.

1. Upgrade the high-performance computing resources required for support of Laboratory scientific initiatives; particularly the hardware and advanced system administration for the BNL Linux Cluster (BLC). This includes augmentation of the cluster processors by at least 50% and deployment of a Storage Area Network for both the Linux and Sun systems. Milestone date: 09/30/02
2. Commence installation and testing of a prototype configuration for the BNL Riken QCDOC machine by 09/30/02.

3.4.2.3New Technology Implementation Assessments (NTIAs)

The weight of this Measure is 33.3%.

1. Perform a prototype New Technology Implementation Assessment for integrating the Java programming language into the AGS Control system by 7/31/02.
2. Establish a service for Parallel Processing Conversion of legacy computer codes, so that they may take advantage of the speedup and cost effectiveness inherent in distributed memory cluster processors. Milestone date: 02/28/02
3. Initiate a program of investigating, deploying and supporting Computational Grid technology; which is likely to serve as the mechanism for a number of multi-site collaborations, including US Atlas and the DOE SciDac programs. Milestone date: 09/01/02

Information Technology Supporting Assessment Measures (SAMs)

Combined with the specific performance measures discussed above, these assessment activities define the scope of planned institutional level assessments that support BSA's Information Technology objective. Performance relative to these assessments is considered in the evaluation of the Laboratory's self-assessment program addressed under Measure 3.1.1.1, Assessment and Improvement.

Information Services: BNL will continue to enhance the institutional-level information services needed to improve the site-wide computing/communications infrastructure, with emphasis on those services that will both improve efficiency and reduce cost while ensuring that the requirements of BNL's scientific mission are met. FY02 initiatives focus on developing a Network Bridging Plan and developing a resource-efficient NT server environment. BSA will monitor progress towards achieving the goals of these initiatives.

World Wide Web: BNL will continue to establish the World Wide Web support model that will address the Laboratory's requirements. This model is defined by a centralized component or Center of Excellence for technical support and a distributed component, for support of local web functionality. The Center of Excellence will be created for the application of web technologies to support BNL scientific and administrative initiatives, with focus on web application programming, web server, and database technologies. BSA will monitor progress towards these initiatives.

Objective 3.5 Communications and Trust

The Laboratory will enhance the foundation of trust and confidence it has built by: strengthening existing relationships and building new relationships with key stakeholders, elected and appointed officials, civic leaders, and other important constituencies; effectively communicating the Laboratory's scientific initiatives and accomplishments; generating community enthusiasm for Laboratory research programs; and working to fulfill the education mission shared with DOE.

The weight of this Objective is 10%.

Purpose and Supporting Information

The Laboratory's Communications, Community Involvement, and Education Program plans serve as a guide to the many activities and initiatives that will be pursued in FY02 to fulfill this objective and to help meet the expectations and performance measures of science and operational departments and divisions across the Laboratory.

Each element of the plan will include associated self-assessment activities for the appropriate organization (e.g. CIGPA, Departments, and Divisions). Stakeholder feedback will be collected and research and self-assessments will be conducted throughout the year to determine program effectiveness, to evaluate program utility, and to make mid-course corrections as necessary.

Performance towards this objective will be based on accomplishment of the goals set forth in the Communications, Community Involvement and Education plans. BNL and BAO will conduct an independent peer review process or other selected process that both parties agree is necessary and appropriate to evaluate the Laboratory's communications, community involvement, and education programs. The peer review or other process selected will focus primarily on the measures below.

Measures

3.5.1 Building Regional and National Recognition

The weight of this Measure is 50%.

The objective of this measure is to increase regional and national recognition of the Laboratory and the Department of Energy. Strategic issues include enhancing the effectiveness of Laboratory communications with internal and external publics, showcasing the results of Lab research with special emphasis on RHIC and other high profile initiatives that produce exciting and scientifically interesting new information, building relationships with the press, and developing and improving the Laboratory's use of electronic media.

Other science initiatives, e.g. a BNL nanoscience center, are carefully tracked and communications plans are prepared and updated in anticipation of developments during FY02.

The World Wide Web continues to grow in importance as a medium for national recognition of scientific progress. During FY02, the Laboratory will reorganize its educational web site, revamping and updating graphics to complement and conform to the main scientific pages. New content will be introduced, target audiences will be refined and the metatags and other aspects of the educational web site will be upgraded to optimize search ability and enhance ease of use for visitors.

The Laboratory will design and launch a new web-based virtual publication to aid in showcasing science developments, exploring their significance and excitement and recognizing the role funding agencies, particularly the Department of Energy, in making them possible.

The Lab's Office of Educational Programs (OEP) has played an important but limited role in gaining regional and national recognition for the Laboratory and the Department of Energy. The strategic thrust of OEP for FY02 will be the planning of a new strategic direction and the development of a comprehensive plan to enhance current activities, explore new directions, and fulfill the education mission that the Laboratory shares with the DOE. An educational programs plan will be prepared and initiation of the plan will commence by 4th quarter FY02.

3.5.2 Stakeholder Involvement and Understanding

The weight of this Measure is 50%.

The Laboratory is committed to ensuring that internal and external stakeholders have access to information about issues of interest and concern, and to providing two-way channels of communication so that stakeholders feel there is a frank and open dialogue with Laboratory management on issues of importance. Responsibility for stakeholder involvement on specific projects rests primarily with the project line manager with strong support from the Laboratory in terms of issues identification, community involvement training programs, information materials development, communications activities such as meetings and roundtables, collection and evaluation of community input, and feedback to the community. For FY02, the Laboratory will:

- Develop an Issues Anticipation Process, linked to the BNL Article Tracking Database and other internal and external sources. The goal of this process will be to better systematize the identification of potential and nascent issues that may affect the Laboratory and its stakeholders, to analyze these issues at some early stage in their development, and to begin developing appropriate and effective programs, focused on the issues.
- Upgrade the training concentration of Level 1 and 2 managers in the community involvement and decision-making process from the current 40 percent to 75 percent.
- Establish an advisory committee and introduce a new volunteerism initiative, entitled Partnership BNL, that will provide support for employee volunteers who wish to act as project managers for selected non-profit, charitable and other civic initiatives. The committee will analyze requests, arrange for support, review feedback on approved programs, and plan recognition for volunteers.

The Laboratory expects the results of a just-completed employee survey to become available at the outset of FY02. Analysis of the communications elements of that survey will be used to generate a plan to upgrade and enhance employee communications for FY02 and beyond. The plan to guide this upgrade will be developed at the close of 1st quarter FY02; employee and senior management feedback will be gathered and modifications

will be incorporated during 2nd quarter; and initial implementation of the plan is expected for 3rd quarter.

In addition, work will be initiated to introduce an HTML/PDF-based searchable archive for the Brookhaven Bulletin

APPENDIX I
(Modified by Mod M073)

DOE DIRECTIVES

Contract No. DE-AC02-98CH10886
Modification M073

There is no List A to this Appendix.

List B to this Appendix contains two parts as follows:

Part I: "Directives List"

This section contains a list of Directives that are considered by DOE as applicable to the BNL contract.

Part II: "Partial Deletions of Directives"

This section contains a list of Directives that were accepted and implemented by the previous contractor but have subsequently been revised by DOE to remove certain sections.

CRD=Contract Requirements Document

DIRECTIVES LIST		
DATE	**DOE DIRECTIVE NUMBER**	**SUBJECT TITLE**
7/14/99	N 142.1	UNCLASSIFIED FOREIGN VISITS AND ASSIGNMENTS (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
10/02/00	N 203.1	CRD - SOFTWARE QUALITY ASSURANCE (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
7/26/99	N 205.1	CRD - UNCLASSIFIED CYBER SECURITY PROGRAM (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
11/1/99	N 205.2	CRD - FOREIGN NATIONAL ACCESS TO DOE CYBER SYSTEMS (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
11/23/99	N 205.3	CRD - PASSWORD GENERATION, PROTECTION, AND USE (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
7/12/01	N 221.7	CRD - REPORTING FRAUD, WASTE AND ABUSE
1/12/01	N 350.6	CRD - ACCEPTANCE OF VALID WORKERS COMPENSATION CLAIMS POLICY
7/15/97	N 440.1	CRD - INTERIM CHRONIC BERYLLIUM DISEASE PREVENTION PROGRAM
9/30/95	N 441.1	RADIOLOGICAL PROTECTION FOR DOE ACTIVITIES (using ORNL/TM-11497 in lieu of Attachment 1)(Extended until 6/30/00 by DOE N 441.4 dated 11/20/98)
2/5/01	N 450.4	CRD - ASSIGNMENT OF RESPONSIBILITIES FOR EXECUTIVE ORDER 13148, GREENING THE GOVERNMENT THROUGH LEADERSHIP IN ENVIRONMENTAL MANAGEMENT
8/24/01	N 450.5	ASSIGNMENT OF RESPONSIBILITIES FOR EXECUTIVE ORDER 13148, GREENING THE GOVERNMENT THROUGH LEADERSHIP IN ENVIRONMENTAL MANAGEMENT
10/17/01	N 450.7	CRD - THE SAFE HANDLING, TRANSFER, AND RECEIPT OF BIOLOGICAL ETIOLOGIC AGENTS AT DOE FACILITIES
12/15/00	N 470.2	CRD - REPORTING UNOFFICIAL FOREIGN TRAVEL (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
4/13/01	N 471.3	CRD - REPORTING INCIDENTS OF SECURITY CONCERN
5/26/00	N 473.4	CRD - DEPARTMENT OF ENERGY BADGES (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
6/5/00	N 473.5	CRD - SECURITY AREA VOUCHING AND PIGGYBACKING (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
9/18/00	N 473.6	CRD - SECURITY CONDITIONS (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
10/26/00	N 473.7	CRD - EXPLOSIVE DETECTION PROGRAM (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
11/3/99	O 110.3	CRD - CONFERENCE MANAGEMENT
9/29/95	O 130.1	CRD - BUDGET FORMULATION PROCESS

DIRECTIVES LIST		
DATE	**DOE DIRECTIVE NUMBER**	**SUBJECT TITLE**
9/30/95	O.135.1	BUDGET EXECUTION-FUNDS DISTRIBUTION AND CONTROL (Extended until 9/30/00 by DOE N 135.1 dated 11/29/99)
11/01/00	O 151.1A	CRD - COMPREHENSIVE EMERGENCY MANAGEMENT SYSTEM
9/30/96	O 200.1	CRD - INFORMATION MANAGEMENT SYSTEM
9/27/95 10/26/95 5/1/95	O 210.1 Change 1 Change 2	CRD - PERFORMANCE INDICATORS AND ANALYSIS OF OPERATIONS INFORMATION
3/22/01	O 221.1	REPORTING FRAUD, WASTE, AND ABUSE TO THE OFFICE OF INSPECTOR GENERAL
3/22/01	O 221.2	CRD - COOPERATION WITH THE OFFICE OF INSPECTOR GENERAL
12/8/97	O 224.1	CRD - CONTRACTOR PERFORMANCE-BASED BUSINESS MANAGEMENT PROCESS
11/26/97	O 225.1A	CRD - TYPE A AND B ACCIDENT INVESTIGATIONS
9/30/95 10/26/95 11/7/96	O 231.1 Change 1 Change 2	CRD - ENVIRONMENT, SAFETY & HEALTH REPORTING CANCELLATION - ES&H Reporting, dated 11/7/96, Paragraph 5b(2).
9/30/95 11/7/96 01/28/00	DOE M 231.1-1 Change 1 Change 2	ENVIRONMENT, SAFETY, AND HEALTH REPORTING MANUAL CANCELLATION - ES&H Reporting Manual, dated 11/7/96, Chapter IV.
8/1/97	O 232.1A	CRD - OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION (As modified by letter Grahn/Gordon, dated 4/10/98, effective 5/5/98)
7/21/97	M 232.1-1A	OCCURRENCE REPORTING AND PROCESSING OF OPERATIONS INFORMATION (As modified by letter Grahn/Gordon, dated 4/10/98, effective 5/5/98)
4/9/01	O 241.1A	CRD - SCIENTIFIC AND TECHNICAL INFORMATION MANAGEMENT
1/30/98	O 251.1A	CRD - DIRECTIVES SYSTEM
11/19/99	O.252.1	CRD - TECHNICAL STANDARDS PROGRAM
12/30/96	O 311.1A	CRD - EQUAL EMPLOYMENT OPPORTUNITY AND DIVERSITY PROGRAM (Extended until 12/30/01 by DOE N 311.1 DATED 12/20/00)
9/30/96 5/8/98	O 350.1 Change 1	CRD - CONTRACTOR HUMAN RESOURCE MANAGEMENT PROGRAMS CRD - EMPLOYEE BENEFITS
7/12/01	O 350.2	CRD - USE OF FACILITY CONTRACTOR EMPLOYEES FOR SERVICES TO DOE IN THE WASHINGTON, D.C., AREA
12/6/95	O 413.1	CRD - MANAGEMENT CONTROL PROGRAM (Extended until 12/6/01 by DOE O 413.1A is published, DOE N 413.1 dated 12/10/99)
1/08/01	O 413.2A	CRD - LABORATORY DIRECTED RESEARCH AND DEVELOPMENT

DIRECTIVES LIST		
DATE	**DOE DIRECTIVE NUMBER**	**SUBJECT TITLE**
10/13/00	O 413.3	CRD - PROGRAM AND PROJECT MANAGEMENT FOR THE ACQUISITION OF CAPITAL ASSETS
11/24/98	O 414.1	CRD - QUALITY ASSURANCE
10/13/95 11/16/95 10/24/96 11/22/00	O 420.1 Change 1 Change 2 Change 3	CRD - FACILITY SAFETY
1/08/01	O 420.2A	CRD - SAFETY OF ACCELERATOR FACILITIES
12/21/00	O 425.1B	CRD - STARTUP AND RESTART OF NUCLEAR FACILITIES
10/14/98	O 430.1A	CRD - LIFE CYCLE ASSET MANAGEMENT
6/13/96	O 430.2	IN HOUSE ENERGY MANAGEMENT (NO CONTRACTS REQUIREMENT DOCUMENT) (Extended until 6/13/01 by DOE N 430.3 Dated 12/13/00)
7/9/99 8/28/01	O 435.1 Change 1	CRD - RADIOACTIVE WASTE MANAGEMENT
7/9/99 6/19/01	M 435.1-1 Change 1	RADIOACTIVE WASTE MANAGEMENT MANUAL
3/27/98	O 440.1A	CRD - WORKER PROTECTION MANAGEMENT FOR DOE CONTRACTOR EMPLOYEES
9/25/95 10/13/95 10/26/95 1/08/01	O 440.2 Change 1 Change 2 Change 3	CRD - AVIATION
6/6/01	O 442.1A	CRD - DEPARTMENT OF ENERGY EMPLOYEE CONCERNS PRG.
5/15/00	O 443.1	PROTECTION OF HUMAN SUBJECTS
10/26/00 9/28/01	O 451.1B Change 1	NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE PROGRAM
10/2/96	O 460.1A	CRD - PACKAGING AND TRANSPORTATION SAFETY
9/27/95 10/26/95	O 460.2 Change 1	CRD - DEPARTMENTAL MATERIALS TRANSPORTATION AND PACKAGING MANAGEMENT
9/28/95 6/21/95	O 470.1 Change 1	CRD - CONTRACTOR SAFEGUARDS AND SECURITY PROGRAM REQUIREMENTS (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
03/01/00	O 470.2A	CRD - SECURITY AND EMERGENCY MANAGEMENT INDEPENDENT OVERSIGHT AND PERFORMANCE ASSURANCE PROGRAM
6/30/00	O 471.1A	CRD - IDENTIFICATION AND PROTECTION OF UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION
6/30/00 10/23/01	M 471.1-1 Change 1	IDENTIFICATION AND PROTECTION OF UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION MANUAL
3/27/97	O 471.2A	CRD - INFORMATION SECURITY PROGRAM (Extended until 12/31/01 by DOE N 251.40, dated 5/3/01)

DIRECTIVES LIST		
DATE	**DOE DIRECTIVE NUMBER**	**SUBJECT TITLE**
1/6/99	M 471.2-1B	CRD - PROTECTION AND CONTROL OF CLASSIFIED MATTER
8/3/99	M 471.2-2	CRD - CLASSIFIED INFORMATION SYSTEMS SECURITY MANUAL (DOE N 205.3, dated 11/23/99 cancel Paragraphs 4j(2) and 4j(6) of Chapter VI, and Paragraph 12a(2)(a) of Chapter VII.)
3/24/97	O 472.1B	CRD - PERSONNEL SECURITY ACTIVITIES (Extended until 12/31/01 by DOE N 251.40 dated 5/3/01)
7/12/01	M 472.1-1B	PERSONNEL SECURITY PROGRAM MANUAL
6/30/00	O 473.2	CRD - PROTECTIVE FORCE PROGRAM
6/30/00	M 473.2-2	PROTECTIVE FORCE PROGRAM MANUAL
11/20/00	O 474.1A	CRD - CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS
11/22/00	M 474.1-1A	CRD - MANUAL FOR CONTROL AND ACCOUNTABILITY OF NUCLEAR MATERIALS
5/8/98	M 475.1-1	CRD - IDENTIFYING CLASSIFIED INFORMATION
9/28/01	O 481.1B	CRD - WORK FOR OTHERS (NON DOE FUNDED WORK)
1/03/01 9/28/01	M 481.1-1A Change 1	REIMBURSABLE WORK FOR NON-FEDERAL SPONSORED PROCESS MANUAL
1/12/01	O 482.1	CRD - DOE FACILITIES TECHNOLOGY PARTNERING PROGRAMS
1/12/01	O 483.1	CRD - DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS
1/12/01	M 483.1-1	DOE COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS
8/25/00	O 551.1A	CRD - OFFICIAL FOREIGN TRAVEL
7/05/01	O 534.1A	CRD - ACCOUNTING
7/12/00	M 573.1-1	MAIL SERVICES USER'S MANUAL
5/2/01	P 141.1	DEPARTMENT OF ENERGY MANAGEMENT OF CULTURAL RESOURCES
6/10/00	P 413.1	PROGRAM AND PROJECT MANAGEMENT POLICY FOR THE PLANNING, PROGRAMMING, BUDGETING, AND ACQUISITION OF CAPITAL ASSETS
5/08/01	P 470.1	INTEGRATED SAFEGUARDS AND SECURITY MANAGEMENT POLICY
6/23/92	1270.2B	SAFEGUARDS AGREEMENT WITH THE INTERNATIONAL ATOMIMC ENERGY AGENCY
7/14/88 10/5/88 5/18/92	2110.1A Change 1 Change 2	PRICING OF DEPARTMENTAL MATERIALS AND SERVICES
6/8/92	2300.1B	AUDIT RESOLUTION AND FOLLOWUP
2/10/94	4330.4B	MAINTENANCE MANAGEMENT PROGRAM (Nuclear Facilities Portion Only)
11/9/88 6/29/90	5400.1* Change 1	GENERAL ENVIRONMENTAL PROTECTION PROGRAM

DIRECTIVES		
DATE	**DOE DIRECTIVE NUMBER**	**SUBJECT TITLE**
2/8/90 6/5/90 1/7/93	5400.5* Change 1 Change 2	RADIATION PROTECTION OF THE PUBLIC AND THE ENVIRONMENT
5/15/84 5/16/88 5/16/89 9/20/91	5480.4* Change 1 Change 2 Change 3	ENVIRONMENTAL PROTECTION, SAFETY, AND HEALTH PROTECTION STANDARDS
7/9/90 5/18/92	5480.19 Change 1	CONDUCT OF OPERATIONS REQUIREMENTS FOR DOE FACILITIES
11/15/94	5480.20A	PERSONNEL SELECTION, QUALIFICATION AND TRAINING REQUIREMENTS FOR DOE NUCLEAR FACILITIES
12/24/91	5480.21	UNREVIEWED SAFETY QUESTIONS
2/25/92 9/15/92 1/23/96	5480.22 Change 1 Change 2	TECHNICAL SAFETY REQUIREMENTS
4/10/92 3/10/94	5480.23 Change 1	NUCLEAR SAFETY ANALYSIS REPORTS
1/19/93	5480.30	NUCLEAR REACTOR SAFETY DESIGN CRITERIA
9/20/91	5530.1A	ACCIDENT RESPONSE GROUP
1/14/92 4/10/92	5530.3 Change 1	RADIOLOGICAL ASSISTANCE PROGRAM
5/8/85	5560.1A	PRIORITIES AND ALLOCATIONS PROGRAM
8/1/80	5610.2	CONTROL OF WEAPON DATA
7/15/94	5632.1C*	PROTECTION AND CONTROL OF SAFEGUARDS AND SECURITY INTERESTS
5/26/94	5660.1B	MANAGEMENT OF NUCLEAR MATERIALS
9/4/92	5670.3	COUNTERINTELLIGENCE PROGRAM
5/18/92	5700.7C	WORK AUTHORIZATION SYSTEM

ACCOUNTING PRACTICES AND PROCEDURES HANDBOOK		
5/2/83	Chapter V	INVENTORIES
6/30/80	Chapter X	PRODUCT COST ACCOUNTING

Appendix I - Part II

PARTIAL DELETIONS OF DIRECTIVES				
DATE	**DOE DIRECTIVE NUMBER**	**SUBJECT TITLE**	**DELETION DIRECTIVE DATE**	**SECTIONS DELETED**
11/9/88 6/29/90	5400.1 Change 1	GENERAL ENVIRONMENTAL PROTECTION PROGRAM	O 231.1 9/30/95 Change 1 10/26/95 Change 2 11/7/96	Paras. 2d, 2b, 4b & 4c of Chap II; Paras 2d & 3b of Chap III; Para 10(c) of Chap IV
2/8/90 6/5/90 1/7/93	5400.5 Change 1 Change 2	RADIATION PROTECTION OF THE PUBLIC AND THE ENVIRONMENT	O 231.1 9/30/95 Change 1 10/26/95	Chapter II: Para 1a(3) (a)
5/15/84 5/16/88 5/16/89 9/20/91	5480.4 Change 1 Change 2 Change 3	ENVIRONMENTAL PROTECTION, SAFETY, AND HEALTH PROTECTION STANDARDS	O 440.1 9/30/95 Change 1 10/26/95	Attachment 2: Paras 2c, 2d(2) - (3), 2e(1) - (8); and Attach. 3: Paras 2c,; 2d(2) - (3), 2e(1) - (7)
7/15/94	M5632.1C-1	MANUAL FOR PROTECTION AND CONTROL OF SAFEGUARDS AND SECURITY INTERESTS	O 470.1 9/28/95 O 471.2A 3/27/97	Chapter XI Chapter III, Paras 1, 2, 4-9

APPENDIX L

(Incorporated by Mod M073)

FY2002 FEE COMPUTATION

FEE BASIS

Contract No. DE-AC02-98CH10886
Modification No. M073
February 22, 2002

APPENDIX L

FY2001 FEE COMPUTATION

FEE BASIS

For FY2002, the performance measure model has one class of performance measures in Appendix B of the Prime Contract that is directly associated with fee (fee bearing). This reflects the approved FY2002 Critical Outcomes of Science & Technology, Environmental Restoration Laboratory Management and Operations. The FY2002 fee structure is in consonance with the following guidelines:

1. The maximum fee is to be in consonance with fees paid for the operation of similar FFRDC laboratories and will have a single tier structure;

2. The fees for integrated subcontractor(s) are included in the total fee;

3. The fee structure is to be based on individual critical outcomes and their associated weights as determined separately;

4. The critical outcome of Science and Technology will act as a "gate," in that a score of Excellent or above is required; there will be no fee if any critical outcome is scored as Marginal or below.

Maximum Fee

The maximum fee that BSA can earn under this matrix for FY 2002 is provisionally established at $7,000,000, if all performance measures areas were rated as "outstanding."

Fee Matrix and Fee Percentage Curve (Figure 1)

Figure (1) below is the fee-determining matrix for the case where Science and Technology (S&T) achieves a score of Excellent or above. The right two columns of the Figure (1) matrix contain a fee percentage that determines the fee earned within each of the score ranges of Outstanding, Excellent, Good and Marginal. In the event that a Critical Outcome score is between two matrix scores, the fee percentage will be determined by interpolation.

If S&T achieves a score below Excellent, the fee matrix is inapplicable. If S&T is scored in the Good range, a single partial-cost-recovery fee of $2.1M (the annual BSA operating budget) is applicable. If any critical Outcome (including S&T) is Marginal there will be no fee.

Fee for Integrated Subcontractors

The Laboratory's "integrated subcontractors" are defined as those subcontractors that are part of the BSA management structure and have responsibilities for the direct supervision of BSA employees. In FY2002, BSA's maximum fee pool is the only fee pool available for the integrated.

Payments and Advances

For purposes of installments of fee, the historical fee of $6,600,000, based on an excellent performance rating will be used for determining the 90% fee payment authorized for FY 2002 which is $5,940,000. If, after DOE's evaluation of BSA's performance for FY2002, a higher amount of fee is authorized then BSA may draw the difference between the higher fee and the amount received through the periodic installments for FY 2002. If however, after DOE's evaluation of BSA's performance for FY2002, a lower amount of fee is authorized, BSA will reimburse DOE all amounts received through periodic installments above the authorized fee amount within 30 days after receiving notice from DOE of the fee authorized for FY2002.

Brookhaven Science Associates
Fiscal Year 2002

APPENDIX L

Figure (1): Fee Determination Matrix (000)

Critical Outcome (CO)			Excellence in Science & Technology		Environmental Restoration		Laboratory Management and Operations		Max Fee: $ 7,000			
CO Weight			60%		8%		32%		% of Max Fee			
CO Max Fee			$ 4,200.0		$ 560.0		$ 2,240.0		Science		Non-Science	
		Score										
Outstanding		4.00		4,200.0	560.0		2,240.0		100.0%		100.0%	
		3.75		4,128.6	550.5		2,201.9		98.3%		98.3%	
	>	3.50		4,061.4	541.5		2,166.1		96.7%		96.7%	
Excellent		3.50		3,990.0	532.0		2,128.0		95.0%		95.0%	
		3.00		3,780.0	504.0		2,016.0		90.0%		90.0%	
		2.75		3,570.0	476.0		1,904.0		85.0%		85.0%	
	>	2.50		3,360.0	448.0		1,792.0		80.0%		80.0%	
Good		2.50	Flat	2,100.0	406.0	*	1,624.0	*	30.0%	**	72.5%	*
		2.00	Flat	2,100.0	364.0	*	1,456.0	*	30.0%	**	65.0%	*
		1.75	Flat	2,100.0	322.0	*	1,288.0	*	30.0%	**	57.5%	*
	>	1.50	Flat	2,100.0	280.0	*	1,120.0	*	30.0%	**	50.0%	*
Marginal/ Unsatisfactory		1.50	**No Fee**						0.0%		0.0%	
		0.00							0.0%		0.0%	

* No Fee for this category if Science's rating is in the "Good" range.

** This reflects a percentage of total fee.

Note: If any of the Critical Outcomes are rated less than "Good" then the Contractor earns no fee for FY 2002.